

DECEMBER, 1961



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Townsville Amateur Radio Club's display at the Townsville Trades and Industries Fair, 28th, 29th and 30th September, 1961. (Left: Mr. Brian Harper, Chairman of Trades Fair Committee; right: Mr. Mal Lappin, President Townsville Jaycees; seated: Mr. Bert Boekholt, VK4LB.) Story on page 25.

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VK3SWI: Sundays, 1100 hours EST, simultaneously on 3573 and 7146 Kc., and 14.016 and 14.225 Mc. Intrastate hook-ups taken on 7135 Kc. Individual frequency checks of Amateur Stations given when VK3WI is on the air.

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VK3SWI: Sundays at 0930 hours WAST, on 7145 Kc. Intrastate hook-ups taken on 7055 Kc.

VK3WI: Sundays at 1000 hours EST, on 7146 Kc. and 3672 Kc. Intrastate hook-ups taken on 7115 Kc.

EDITORIAL



THE CLOSE OF 1961

December is with us again and the holiday season approaches when most of us turn to the outdoors, to participate in active sport—those of us who feel young enough; to perhaps finish that job around the house which we kept putting off; to go motoring in search of places we have never been before; or to just take this golden opportunity to take a good rest from the pressure of the year's work in defence of a livelihood. Whatever you might be doing, wherever you might be going, we at Headquarters take this opportunity of wishing you all a very Happy Christmas.

We suggest leaving Amateur Radio alone for a week or two to take advantage of a short time of enjoying other things. There is nothing like shaking off the shackles of things-we-do-off-and-on most of the year to enjoy a complete change of scenery and activity.

1961 has seen a possible culmination of the W.I.A.'s effort on behalf of the Amateur Service to protect the Amateur band frequency allocations. The November issue of "Amateur Radio" carried a brief report about the Government's acceptance of the recommendations presented to it by the Radio Frequency Allocation Review Committee—a committee set up in 1960 by Postmaster-General C. W. Davidson, O.B.E., representing the major frequency users. The task of this committee was to review the allocation of frequencies to all Australian users in the light of the proposed Geneva Frequency Table, 1959, with a view to rationalising the use of the frequency spectrum by the various Australian transmitting services.

The recommendations of the R.F.A.R.C. include some sweeping changes which in some instances will be costly. The committee also provided 13 television channels for the future requirements of the Australian Television Service. The Amateur Service

came under constant review because of its allocations throughout the spectrum. A completely unbiased committee working in the national interest looked very closely at Australian Services before it made recommendations and what finally was submitted to the Government completed a year's work by a team of representatives qualified to see that justice was done in allocating these frequencies from one end of the spectrum to the other.

The Australian Amateur Service lost a few kilocycles in some parts of the spectrum and gained some in others. It came out with a better status as a recognised Service. It came out with some bands on a shared basis secondary to other services, but at least it maintained its bands. With other services it came out with a recommendation which will protect its operators who operate in areas where t.v. reception is of a low signal strength. To sum the position up in a few words—it came out of it very well indeed.

From now on it's up to the Amateur himself. Use the bands! They are yours to use! If you don't use them some other service will rightly claim they can. This committee made it quite clear that no service—and we repeat, no service—will hold frequencies in the frequency spectrum if they don't use them. That doesn't mean that we have to be filling the bands allocated to us for 24 hours of the day—other services don't do that. But it does mean that we must regularly operate within our bands to justify their allocation.

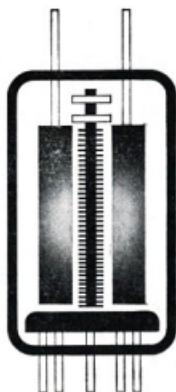
So take that few days off during Christmas and forget about Amateur Radio. Take a breath of fresh air and commence next year with a new purpose, to come on the air and use up the allocation that has been held for you by dint of hard work with a purpose.

HAPPY CHRISTMAS!
FEDERAL EXECUTIVE.

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PHILIPS



TRANSMITTING AND RECTIFYING TUBES FOR MOBILE EQUIPMENT

The necessity of telecommunication equipment for sea and air transport is obvious. In this field, telecommunication equipment is often obligatory. In many other fields, however, a need for communication is equally felt, but the bulk and cost of transceivers of usual design has long been prohibitive. Faced with this problem, equipment designers and tube and component manufacturers, working in close co-operation, have gradually developed mobile transmitting equipment that successfully combines small dimensions, low cost, ease of operation, high and dependable performance. As a result, mobile telecommunication equipment is being used on an ever-increasing scale in numerous fields, as, e.g.:

- coasters.
- motor launches of shipping agencies, ships' chandlers, contractors of harbour works.
- small fishing boats.
- tugs (e.g., for direct communication with their tow).
- seagoing yachts and other small maritime craft.
- fireguard for contact with central office.
- taxi cabs for contact with the central point.
- doctors' cars for contact with their base.
- building firms for contact between remote or not easily accessible spots.
- public utility firms for contact with their outside personnel.
- service firms for contact with their personnel on vehicles.
- lonely farms in sparsely populated areas.
- airport vehicles.

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|--------------|------------------------------|-----|-----------------------|------|--------------------------------|-------|--------------------------------|-------|-------------------------------|-------|-------------------------------|-----|-------------------------------|-----|-------------------------------|-----|-------------------------------|-----|---------------------------------|-----|-------------------------|-----|-----------------------|-----|-------------------------|-----|-------------------------|-----|------------------|--|
| | (W) | (W) | (W) | (W) | (W) | (W) | (W) | (W) | (W) | (W) | (W) | (W) | (W) | (W) | (W) | (W) | (W) | (W) | (W) | (W) | (W) | (W) | (W) | (W) | (W) | (W) | (W) | (W) | (W) | |
| 2 Mc/s | 5.8 | 7.0 | 5.8 | 8.0* | 18.5* | 18.5* | 18.5* | 18.5* | 25.5 | 25.5 | 48 | 69* | 52 | 52 | 69* | 90 | 195 | 200 | 132 | 390 | 375 | 390 | 500 | | | | | | | |
| 20 Mc/s | 5.8 | 7.0 | 5.8 | 8.0* | 18.5* | 18.5* | 18.5* | 18.5* | 35.0* | 35.0* | 48 | 69* | 52 | 52 | 69* | 90 | 195 | 200 | 132 | 390 | 375 | 390 | 500 | | | | | | | |
| 30 Mc/s | 5.8 | 7.0 | 5.8 | 8.0* | 18.5* | 18.5* | 18.5* | 18.5* | 35.0* | 35.0* | 48 | 69* | 52 | 52 | 69* | 90 | 195 | 200 | 132 | 390 | 375 | 390 | 500 | | | | | | | |
| 60 Mc/s | 5.8 | 7.0 | 5.8 | 8.0* | 18.5* | 18.5* | 18.5* | 18.5* | 35.0* | 35.0* | 48 | 69* | 52 | 52 | 69* | 90 | 195 | 132 | 390 | 375 | 390 | 500 | | | | | | | | |
| 100 Mc/s | 5.8 | 7.0 | 5.8 | 8.0* | 18.5* | 18.5* | 18.5* | 18.5* | 35.0* | 35.0* | 48 | 53* | 40 | 40 | 53* | 90 | 195 | 390 | 375 | 390 | 480 | | | | | | | | | |
| 120 Mc/s | 5.8 | 7.0 | 5.8 | 8.0* | 18.5* | 18.5* | 18.5* | 18.5* | 26.6 | 26.6 | 48 | 47* | 35 | 35 | 47* | 90 | 195 | 390 | 375 | 390 | 475 | | | | | | | | | |
| 150 Mc/s | 5.8 | 7.0 | 5.8 | 8.0* | 18.5* | 18.5* | 18.5* | 18.5* | 26.6 | 26.6 | 48 | 47* | 29 | 29 | 47* | 90 | 195 | 390 | 360 | 390 | 465 | | | | | | | | | |
| 200 Mc/s | 5.8 | 7.0 | 5.8 | 8.0* | 18.5* | 18.5* | 18.5* | 18.5* | 20.0 | 24.0* | 48 | 90 | 185 | 185 | 90 | 185 | 197 | 225 | 445 | | | | | | | | | | | |
| 300 Mc/s | 5.8 | 7.0 | 5.8 | 8.0* | 18.5* | 18.5* | 18.5* | 18.5* | 6.5 | 8.0* | 34.5 | 75 | 170 | 170 | 75 | 170 | | | | | | | | | | | | | | |
| 430 Mc/s | 5.8 | 7.0 | 5.8 | 8.0* | 18.5* | 18.5* | 18.5* | 18.5* | 7.0 | 7.0 | 23 | 66 | 155 | 155 | 66 | 155 | | | | | | | | | | | | | | |
| 500 Mc/s | 5.8 | 7.0 | 5.8 | 8.0* | 18.5* | 18.5* | 18.5* | 18.5* | 7.0 | 7.0 | 22 | 60 | 140 | 140 | 60 | 140 | | | | | | | | | | | | | | |
| 600 Mc/s | | | | | | | | | 7.0 | 7.0 | 20 | | | | | | | | | | | | | | | | | | | |
| 800 Mc/s | | | | | | | | | 7.0 | 7.0 | | | | | | | | | | | | | | | | | | | | |
| 900 Mc/s | | | | | | | | | 7.0 | 7.0 | | | | | | | | | | | | | | | | | | | | |
| 960 Mc/s | | | | | | | | | 8.0* | 8.0* | | | | | | | | | | | | | | | | | | | | |

* Intermittent. † "Quick-heating" version of type QQE03/12 (6360). ‡ "Quick-heating" version of type QE05/40 (6146).



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"THE BEER BOTTLE VERTICAL"

K. C. SEDDON, VK3ACS, and H. L. HEPBURN, VK3AFQ

READERS may be interested in an antenna used with excellent results by the authors during the 1961 National Field Day when they formed one of the teams operating under the call sign of VK3APC/P—The Moorabbin and District Radio Club.

No originality is claimed for it, but we felt that its construction (and perhaps other possible new developments from it) was unusual enough to warrant a mention.

The antenna is a vertical half-wave dipole fed at one end with co-axial cable. On the National Field Day it was used in conjunction with two end-fed long wires. One was 240 ft. long and pointed NE/SW, whilst the other was 180 ft. long and pointed NW/SE. As they were fairly directional on 14 Mc. to VK2/VK4 and VK6/VK5, the need was soon felt for an antenna which would enable the band to be monitored in all directions. Once a "new" station was heard and identified, the idea was to use the appropriate long wire to obtain a QSO.

However, as it turned out, the vertical gave us as good results on 14 Mc. as either long wire and saw a great deal of use. At the end of the first period of the Contest, nearly two hours were spent in QSO with various Ws who were giving S6-8 reports from the 25w. rig.

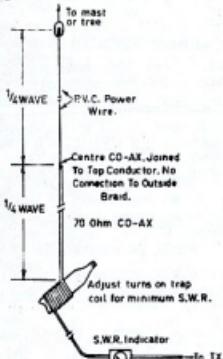


Fig. 1 General arrangement of vertical antenna.

The sketch shows the general set up. A piece of p.v.c. covered power wiring, a quarter wavelength long on 14 Mc., and fitted at one end with an insulator, was soldered to the centre conductor of a long piece of 70 ohm co-axial cable. The end of the co-ax had been stripped of outer covering and insulation for about $\frac{1}{2}$ " back from the end.

In our case, the junction was made mechanically secure by threading both co-ax and wire through the mounting

● An interesting practical article written by members of a VK3 team in the last National Field Day Contest. The authors developed a new idea for horizontal aerials which as far as known is presented for the first time.

holes of a small stand-off insulator, and soldering the two wires at the tag on top of the stand-off. Any suitable method of strengthening may be used (even a "splint" of dry timber tapered on), but it is most important that some form of support be used as otherwise the whole weight of the bottom half of the finished antenna would be placed on the soldered joint.

Next, a 12" length of insulation tape was doubled round the outside of the co-ax a quarter wavelength along from the centre joint. This left a 6" "tab" sticking out from the co-ax. This "tab" was placed lengthwise along an empty beer bottle and eight turns of the co-ax wound onto the bottle over it, so securing the first turn. The last turn was temporarily taped into place round the bottle.

Next, the whole boiling was hauled up from a convenient (?) tree branch until the bottle and coil were about three feet off the ground. (Later on it went a bit higher, but for the moment leave it near the ground.)

The far end of the co-ax was then coupled to the transmitter via a s.w.r. indicator, and the number of turns on the bottle adjusted to give minimum s.w.r. In our case, the reflected power showed less than a division on a meter having a forward power indication of 50 divisions, so that the indicated s.w.r. was at least 1.04/1, and possibly a bit better. We found that we had to make three additions to the number of turns before this state of affairs prevailed, and we finished up with 12 turns. The final turn was then securely taped into place and the antenna pulled up as far as it would go. The bottle finished up about 8-9 feet off the deck.

We could not measure any appreciable variation in the s.w.r. over the 14.0-14.2 Mc. segment of the band we were using.

Because the coil acts as a self resonant trap at the frequency in use, the braid of the co-ax between coil and transmitter is isolated from r.f., whilst the braiding of the quarter wave becomes the second half of a dipole. Thus the whole thing acts as a conventional centre fed vertical dipole, with a feed impedance in the region of 70 ohms.

The co-ax from transmitter to coil can be of any length you please as it is acting as a non-resonant feeder.

Coil winding data may vary somewhat with different formers. The num-

ber of turns we used will not be exact in all cases, but will form a good starting point if your former is between 3 and $3\frac{1}{2}$ inches outside diameter. You simply add on turns or take them off until you obtain the lowest s.w.r.

Other frequencies can be tackled in the same fashion. Lower frequencies would need more turns (and a much higher tree!), whilst higher frequencies would need less turns. The important thing is to adjust the number of turns of your co-ax on your bottle for the minimum s.w.r.

Whilst it has not yet been tried, there seems no reason why the antenna could not be used in a horizontal position. The feed point being physically at one end, but still electrically in the centre, would then be very useful in the typical suburban lot where centre feeding of dipoles can present a problem if the "shack" is in the house. As the resonant trap has a high L/C ratio, it is possible that it will be effective over the greater part of the band for which it is designed. In addition, the use of co-ax as one active element must tend to decrease the Q of the antenna and so make it less critical to frequency change. This latter possibility could be enhanced and symmetry improved by using a second piece of co-ax with inner and outer conductors in parallel in place of the power wire.

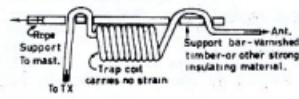
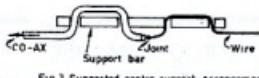


Fig. 2 Suggested end support arrangement.

For a horizontal model, there would be a couple of points to be watched. The need to remove strain from the centre junction and the coil would become extremely important, so that provision of low loss "splints" across them would be obligatory. The second sketch gives suggested constructional details.



When one of the authors (VK3AFQ) gets round to putting up a 40 ft. pole, it is intended to carry out measurements on a 80 metre horizontal model, so that there may be more on this subject anon.

As a second development, there is the frightful possibility that the coil trap could be air-cored rather than being wound on an empty beer bottle. This one we will leave to the theoreticians as the practical prospect has little attraction.

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|--------|------|-------|---------|----------------------------|--------------------|
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| PT1783 | 180 | 410 | 5v. 3a. | 6.3v. 4a. c.t. | 100/- + tax |
| PT1782 | 200 | 450 | 5v. 3a. | 6.3v. 3a. c.t. | 106/- + tax |
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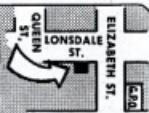
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GETTING TO KNOW THE OSCILLOSCOPE

PART ONE

J. L. K. MATCHETT,* B.A., B.Sc., B.Ed., VK3TL

WHEN one first examines the control panel of a cathode ray oscilloscope, one is struck with the complexity of the apparatus. It would seem that it may be too complicated an apparatus to explain to pupils even of Matriculation standard. And whilst the writer agrees that there are many components in its circuits, it is not impossible to carry out a number of simple experiments which illustrate the principles behind its rather complex circuitry. Such experiments serve to bring out some of the practical applications of resistors, capacitors, electron emission and so on, which are studied by the pupils. It is the purpose of this demonstration then, to illustrate some of these principles with apparatus easily procurable by the teacher.

Probably the best starting point in understanding the cathode ray tube (which is the most important component of the cathode ray oscilloscope) is the ordinary electric light globe. A current may be passed through it and the pupils told that hot bodies emit negatively charged particles called electrons. In the case of an electric light globe, the electrons simply form a space charge about the hot filament.

The next step is to revise the pupils' knowledge of the wireless valve. Point out the function of the plate, cathode, filament and grid. Obtain a few old radio valves from the local radio repair shop. (He will be only too glad to get rid of them.) Wrap some clothing around each one in turn and gently squeeze in a vice. In this way only the glass envelope will be smashed and not the valve electrodes.

The directly-heated cathode type (ordinary battery type), may be compared with its indirectly heated equivalent (a.c. mains type), with its separate cathode coated with material which will readily emit electrons when hot. Some c.r.o.'s have their cathode connected to their filament, i.e. heaters, others not. Valve types should be examined and the teacher could demonstrate that the hot filament is emitting electrons by means of a simple electroscope.

Once the principles of the triode are understood, it is time to examine the c.r. tube itself, and the similarity to the radio valve pointed out.

Concentrate upon the cathode, heater, grid and accelerating anode electrode.

Fig. 1 shows a simplified drawing of the c.r. tube.

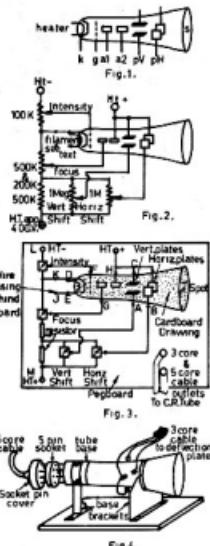
In addition, the electrodes are connected to pins which protrude from the base of the c.r. tube as in the case of a radio valve. Not all c.r. tubes are as simple as this but they all have an electron gun, that is, a part that shoots electrons toward the screen.

A simple circuit for the c.r. tube may now be examined. A circuit show-

ing values which ensure proper shift of the electron beam, focus, etc., are only found by experiment, but the writer found the circuit of Fig. 2 suitable for the 905 tube. Undoubtedly it would be quite suitable for many other types.

Most of these components are obtainable from radio odds and ends. All are potentiometers ("pots" as they are called), with the exception of the 200K and 500K fixed resistors.

Note how the grid is made more negative than the filament and also how a voltage (obtained by allowing a current to flow through a resistor) is applied to one of each set of deflecting plates.



The 905 (or 905A or 907, both of which are very similar) is available on the disposals market and is very suitable for classroom demonstration. This tube lacks the usual graphite lining within the tube which serves to facilitate the return of electrons to high tension anode. In addition, the connections to the deflection plates are brought out through the glass about half way down the tube, and so an ordinary five-pin valve socket will suffice for the c.r. tube pins. Whilst on the question of sockets, always try to obtain the appropriate socket for the tube you buy.

In order to demonstrate the c.r. tube, the wiring was set out on a piece of masonite peg board enamelled white to

show up the coloured wires. The size of the board was approximately 2 ft. x 1 ft. 6 in.

A drawing of the c.r. tube was made upon a stiff piece of cardboard and then stuck on to the peg-board as shown in Fig. 3. The wires as shown leading to the piece of cardboard were then taken at the back of the board to the cable outlets. The three-core cable is connected to one of each set of plates and the high tension to each of the remaining plates (Connections A, B and C in Fig. 3). The five-core cable (or one ordinary three-core and one two-core cable) is connected to each of the two heaters, the grid, focusing anode, and accelerating anode. (Connections D, E, F, G and H in Fig. 3.) Fig. 4 drawing shows the connections of each cable to the actual c.r. tube.

The socket connectors of most c.r. tubes differ from each other. In the case of the 905 (or 905A or 907), they are:

- Pin 1—Heater.
- " 2—A1 (focusing anode).
- " 3—A2 (accelerating anode).
- " 4—Grid.
- " 5—Cathode-heater.

Unfortunately socket connections for c.r. tubes are not shown in valve manuals, but some are listed in the A.R.R.L. Handbook which is possessed by almost all Radio Hams and many technicians. This volume also contains details of filament voltage, filament current, anode voltages and grid bias. Amongst the common c.r. tubes available on the disposals market at reasonable prices (average about 30/-) are the following: 5BP1, 902, 915, 3AP1 (or 906), VCR-139A, VCR138A, VCR97, 511, 913, CV-112. None of these tubes require high voltages. When buying a c.r. tube avoid buying one which requires magnetic deflection coils. Electro-static deflection tubes have simpler circuitry and illustrate principles more clearly.

The electric light switch cover affords protection from any contact with the bare radio valve socket and is squeezed over the cable. The three wires of the three-core cable are connected to the deflection plate caps with four insulated plate caps of an 807 transmitting valve type. The actual c.r. tube is mounted upon a heavy baseboard by means of aluminium brackets cut to fit the diameter of the tube. When fitting brackets ensure that rubber padding is used so that the tube will not be scratched. It should be noted that once set up the tube should not suffer any vibration and must not be scratched with metal or the tube may explode. Four other connections are necessary to the peg-board in addition to the two cables. These are firstly two twisted wires which come from a source of filament current. This is usually a 6.3 volts supply but in the case of the 905, a 2.5 volt supply is necessary. A dropping resistor of high wattage rating may be used to drop the voltage across the filaments from 6.3 to 2.5. You will find (Continued on Page 7)

* 645 Riverside Rd., Box Hill, Victoria.

The above article is the summary of a demonstration given by the author to Secondary School Science Teachers during the Summer School, January 1969.

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Transistors are used throughout the entire receiver section, and in all low level transmitter stages up to the driver. This results in a total of only three tubes, the 12BY7 driver, and the two 6164s in the final amplifier stage.

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- ★ Very low current drain from the car battery:

| | |
|------------------|------------------|
| Receive only | 0.8 to 1.8 amps. |
| Standby | 2.4 amps. |
| S.S.B.—no mod. | 10.5 amps. |
| S.S.B.—peak out | 18 amps. |
| A.M. 100% mod. | 18 amps. |
| C.W. maximum out | 23 amps. |

No need for alternators or heavy duty generators.
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W.I.A. EXHIBIT AT HOBART

The Tasmanian Division of the W.I.A. staged an exhibit at a recent Hobbies and Careers Exhibition organised by the Hobart Junior Chamber of Commerce in the City Hall, Hobart, from 5th to 9th September. Being during the school holidays, the exhibition was well attended by both children and adults alike—emphasis seemed to be on careers, other exhibits being provided by

Operation was on 80, 40, 6 and 2 metres under the call of VK7WI/P. V.h.f. only was used throughout the day, both around the town and, using a walkie-talkie on 2 metres, to points around the hall. Mike VK7ZAV did a marathon job through the period and was reinforced by others when possible.

Gear on display included QSL cards and certificates, converted and uncon-



the Services, various government departments, plus private enterprise.

We received very good publicity, signed quite a few new members, were featured by the local commercial t.v. station, and had an "interview" recorded, via Amateur Radio, and rebroadcast over a local national radio station.

verted disposal gear, Ross Hull and R.D. Trophies, plus various bits and pieces.

A special QSL card will be issued to all stations contacted.

Pictured is the exhibit and some of the v.h.f. boys, from left: Wilf VK7ZAQ, Mike VK7ZAV, Reg VK7ZAO, and extreme right, Bryan VK7ZBE.

KNOW THE OSCILLOSCOPE

(Continued from Page 5)

a length of ordinary electric jug element satisfactory. For your calculation, the current through the filament is rated as 2.1 amps. In many cases, the dropping resistor won't be necessary, for some old power transformers with a 2.5 volt heater winding are to be found at a very cheap price since they are no longer used in radio circuits. The remaining two wires are connected one to each of the high tension terminals as shown.

To ensure good connections, two insulated terminals, one red, one black, are fixed on to the peg-board for the h.t. and two cheap green terminals for the filament wires. These terminals are shown on Fig. 3 as points J, K, L and M. The shafts of the four pots were brought out to the front of the peg-board and small square blank scales with pointer knobs fitted. Full use should be made of old radio parts which are available at low cost. Some useless valves are on the disposals market for a few shillings and some of these are very large; thus their parts are very

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SAFETY PRECAUTIONS

Even a few hundred volts can cause most unpleasant physiological effects if carelessly handled. The voltages developed in many Amateur stations are capable of causing injury or death. Reasonable precautions should always be taken.

All apparatus and wiring should be so placed and constructed that it is impossible to touch points of high direct-current or radio-frequency potential under normal operating conditions.

The aerial should never be directly connected to the anode coil of the output stage (this is illegal and highly dangerous). Never attempt to change transmitter coils with the power ON.

Use double-pole iron clad switches to ensure complete isolation of all mains transformers. These switches should be clearly marked with ON-OFF positions. Some other person in the house should know where to find the main switch for use in case of emergency.

High wattage bleeder resistances across power supply filter capacitors will prevent many shocks. If it is necessary to touch the transmitter while the power is ON, keep one hand behind your back or in your pocket; never wear headphones while working on a transmitter.

Insulated extension spindles fitted to transmitter tuning controls will eliminate danger from exposed grub screws.

MAKE SURE THAT ALL METAL WORK IS EFFECTIVELY EARTHEDE

—Reprinted from R.S.G.B. "Bulletin."



APPLYING FOR AN AWARD?

When applying for an Amateur Radio award, whether direct, through the W.I.A., or through an overseas society, always—

1. Write a letter of application for the award.
2. Supply a check list showing the essential details of the cards submitted, viz. Date, time, band, mode.
3. Write your name, address and call sign legibly on each application sheet.
4. When forwarding QSL cards, always enclose international reply coupons or appropriate unused postage stamps for the return mailing cost on your cards.

Your close attention to the above-mentioned points will make the task of the Awards Manager ever so much easier.

—Eric Trebillock, BERS-196.

easily examined. The "gun" of a broken c.r. tube and a magic-eye indicator also come in useful in your explanation of the workings of the c.r. tube. Reference may be made to the effect of the electrostatic field created by the focusing and accelerating cylindrical electrodes upon the electron stream, and a magnet waved near the fluorescent screen to show magnetic effect upon the electron beam.

RESULTS OF REMEMBRANCE DAY CONTEST, 1961

OUR congratulations this year go to Western Australia for regaining the Remembrance Day Trophy from the holders for the last two years, Tasmania. We understand that a lot of organising went into contest preparations in W.A., and the results prove that the effort certainly was worth it.

Second place goes to South Australia, followed by Tasmania, New South Wales, Victoria and Queensland, in that order.

An interesting sidelight is that this year VK2 beat VK3 into fourth place. The bands were well populated during the Contest, but it is a pity that some States still have a participation factor of less than 10%. Victoria sent in only 80 logs out of 1,314 licensees, while for instance Western Australia submitted 87 logs out of only 288 licensees.

After all these years it becomes quite obvious that the larger States will never get the required number of log entries to win the Contest. Several suggestions for changes in the rules and in the scoring system have been submitted with this year's logs, and next year we may try something new. The Federal Contest Committee will study the possibilities of any suggestion sent in and will, in due course, submit the most promising to Federal Executive and to the Divisions for consideration. If you have any ideas, let's hear them.

Unfortunately the Contest Committee's lot is not a happy one. In the past we have not passed much comment on the logs received. Due to the large number of logs which, in one way or another, do not comply with the rules, we feel we owe it to the contestants to point out the major mistakes made.

Wherever possible the Committee has corrected the faults, but unfortunately we had to disqualify several logs which, among other things, did not show the time when each contact was made. Apart from those, there were quite a number of logs without the front sheet, some were without the declaration, while others started serial numbers with a number other than "001", claimed wrong points (obviously through reading the scoring table from top to bottom), claimed no points at all, had the times in G.M.T., had the log in order of bands worked or in order of c.w. and phone contacts, instead of in numerical order.

By careful reading of the rules, all these mistakes could have been avoided, saving the contestants points and the F.C.C. a lot of extra work. We are happy to say, however, that the biggest logs without exception were excellently made out and we found hardly any faults in them. We hope that the above remarks will help everybody to send in better logs and obtain bigger scores next year.

Unfortunately, quite a few of the Short Wave Listeners had also trouble with the scoring, nearly half the logs had wrong scores. Many listeners claimed points for both the stations calling and the stations being called. This F.C.C.'s interpretation of Rule 3 (Receiving Section), and its ruling, is that points can only be claimed once for one particular contact, whether or

REMEMBRANCE DAY CONTEST 1961 RESULTS

| | Total | Aver. | Per- | State | Total |
|-------------------|-------|-------|--------|-------|--------|
| State | State | Top | Licen- | Log | State |
| | Score | Six | sees | age | Points |
| New South Wales | 23676 | 940 | 1372 | 124 | 9.04 |
| Victoria | 16793 | 746 | 1314 | 80 | 6.09 |
| Queensland | 9094 | 594 | 446 | 48 | 10.76 |
| South Australia | 17357 | 917 | 518 | 78 | 15.06 |
| Western Australia | 10787 | 546 | 288 | 87 | 30.21 |
| Tasmania | 7916 | 600 | 148 | 49 | 33.11 |

not both sides of the contact can be heard by the listener.

One other thing we would like to mention. In all States club stations entered the Contest under their own call sign, without showing the call sign of the operator of the station, as required by Rule No. 6. There have been precedents to this in previous Contests and we have therefore accepted these logs this year. However, as it is possible for one operator to submit two logs, one under the club station call sign and another one under his own, the rule regarding substitute operators will be re-worded to make it quite clear that club stations come under this category.

F.C.C. hopes that the above remarks will not be taken as criticism, but rather as what they are intended to be, an attempt to give everybody a chance to submit a bigger and better log for the next Contest.

Once again our congratulations to Western Australia for a very good effort, and we hope that all States will put up a good fight next year in trying to win the trophy from them.

Now here are the results in detail.

STATE TROPHY

Western Australia 3798 points

HIGHEST STATE LOG AVERAGE

South Australia 222 points

HIGHEST INDIVIDUAL SCORE

VKSNO 1389 points

Open—AWARD WINNERS

| | |
|--------------------|-----------|
| VK2AHM—R. J. Whyte | 1215 pts. |
| 3ALZ—I. F. Berwick | 874 " |
| 4DP—D. M. Portley | 919 " |
| 5NO—L. H. Vale | 1389 " |
| 6RU—J. E. Rumble | 903 " |
| 7MZ—H. Hancock | 362 " |

Phone—

| | |
|---------------------|-----------|
| VK2AHM—N. A. Hanson | 1072 pts. |
| 3ADW—D. A. Wardlaw | 839 " |
| 4UX—C. P. Singleton | 609 " |
| 5FT—F. K. Tapley | 959 " |
| 6KW—R. W. S. Hugo | 592 " |
| 7MS—D. M. Slowan | 807 " |

C.w.—

| | |
|-------------------|----------|
| VKSQL—F. T. Hine | 556 pts. |
| 3XB—I. Stafford | 423 " |
| 4XW—G. Harmer | 251 " |
| 5MY—H. M. Roberts | 457 " |
| 6SM—M. H. Shaw | 358 " |
| 7SM—S. G. Moore | 446 " |

Receiving—

| | |
|-----------------------|----------|
| L2211—R. C. Abernethy | 808 pts. |
| L3076—R. Young | 629 " |
| T. A. Lane (VK4) | 363 " |
| K. A. Wehr (VK5) | 1084 " |
| L6021—P. W. Drew | 586 " |
| R. De Balfour (VK7) | 965 " |

NEW SOUTH WALES

Top Six Logs—

| | |
|--------|-------------|
| VK2AHM | 1215 points |
| 2AHH | 1072 " |
| 1PM | 948 " |
| 2ASZ | 842 " |
| 2DO | 821 " |
| 2BO | 740 " |

Phone—

| | |
|------------|------------|
| Cont. Pts. | Cont. Pts. |
|------------|------------|

| | |
|---------|--------------|
| VKSQAHM | VK2YVO |
| 373 | 30 |
| 1PM | 2GZ |
| 2AHL | 34 |
| 2AZL | 64 |
| 2ADE | 59 |
| 2TV | 55 |
| 2VE | 18 |
| 2APF | 53 |
| 2AWZ | 22 |
| 1AOQ | 48 |
| 2AXI | 47 |
| 2NB | 44 |
| 2ALV | 44 |
| 2XT | 37 |
| 2AVH | 37 |
| 2CS | 35 |
| 2AMA | 34 |
| 2HDL | 34 |
| 2AFP | 33 |
| 2BB | 32 |
| 2OB | 31 |
| 1VE | 29 |
| 2AZX | 28 |
| 2AET | 27 |
| 2AT | 26 |
| 2AIA | 25 |
| 2ACQ | 24 |
| 2AQJ | 23 |
| 2RJ | 22 |
| 2ADL | 21 |
| 1KM | 20 |
| 2ALU | 19 |
| 2XK | 19 |
| 2MW | 18 |
| 2OE | 18 |
| 2AII | 18 |
| 2AWI | 18 |
| 2ADA | 18 |
| 2AAH/M | 18 |
| 2LAQ | 17 |
| 2TQZ | 16 |
| 1RA | 16 |
| 2PFT | 15 |
| 2AJL | 15 |
| 2AAT | 10 |
| 2AKX | 7 |
| 2AWX | 7 |
| 2TGT | 6 |
| 2ACZ | 6 |
| 2WI | 6 |
| 2MP | 6 |
| 2ADM | 6 |
| 1KX | 5 |
| 2DE | Disqualified |
| 2DE | Disqualified |

Open—

| | |
|------------|------------|
| Cont. Pts. | Cont. Pts. |
|------------|------------|

| | |
|---------|--------|
| VKSQAHM | VKSQAH |
| 405 | 70 |
| 2ASZ | 58 |
| 2DO | 53 |
| 2ZD | 53 |
| 2ZP | 50 |
| 2PN | 49 |
| 2APK | 47 |
| 2GZ | 47 |
| 2AGS | 47 |
| 2CK | 46 |
| 2AOC | 45 |
| 2AGH | 45 |
| 1JR | 44 |
| 2EU | 43 |

| | |
|--------|--------|
| VKSQAH | VKSQAH |
| 317 | 167 |
| 842 | 167 |
| 521 | 167 |
| 740 | 167 |
| 740 | 167 |
| 673 | 167 |
| 493 | 167 |
| 321 | 167 |
| 321 | 167 |
| 227 | 167 |
| 2AUIC | 167 |
| 2CH | 15 |
| 2AUIC | 15 |
| 2AU | 15 |
| 2H2Z | 15 |
| 2ZAH | 15 |
| 2PL | 15 |
| 2AVN | 15 |

C.w.—

| | |
|------------|------------|
| Cont. Pts. | Cont. Pts. |
|------------|------------|

| | |
|--------|--------|
| VKSQAH | VKSQAH |
| 317 | 167 |
| 842 | 167 |
| 521 | 167 |
| 740 | 167 |
| 740 | 167 |
| 673 | 167 |
| 493 | 167 |
| 321 | 167 |
| 321 | 167 |
| 227 | 167 |
| 2AUIC | 167 |
| 2CH | 15 |
| 2AUIC | 15 |
| 2AU | 15 |
| 2H2Z | 15 |
| 2ZAH | 15 |
| 2PL | 15 |
| 2AVN | 15 |

| | |
|--------|--------|
| VKSQAH | VKSQAH |
| 317 | 167 |
| 842 | 167 |
| 521 | 167 |
| 740 | 167 |
| 740 | 167 |
| 673 | 167 |
| 493 | 167 |
| 321 | 167 |
| 321 | 167 |
| 227 | 167 |
| 2AUIC | 167 |
| 2CH | 15 |
| 2AUIC | 15 |
| 2AU | 15 |
| 2H2Z | 15 |
| 2ZAH | 15 |
| 2PL | 15 |
| 2AVN | 15 |

| | |
|--------|--------|
| VKSQAH | VKSQAH |
| 317 | 167 |
| 842 | 167 |
| 521 | 167 |
| 740 | 167 |
| 740 | 167 |
| 673 | 167 |
| 493 | 167 |
| 321 | 167 |
| 321 | 167 |
| 227 | 167 |
| 2AUIC | 167 |
| 2CH | 15 |
| 2AUIC | 15 |
| 2AU | 15 |
| 2H2Z | 15 |
| 2ZAH | 15 |
| 2PL | 15 |
| 2AVN | 15 |

VICTORIA

Top Six Logs—

| | | |
|--------|-----|--------|
| VK5ALZ | 874 | points |
| 3ADW | 839 | " |
| 3AIT | 765 | " |
| 3DR | 753 | " |
| 2APJ | 625 | " |
| 3UW | 622 | " |

Phone—

| Cont. Pts. | Cont. Pts. |
|------------|------------|
| VK5ADW | 314 889 |
| 3AIT | 276 763 |
| 3DR | 284 753 |
| 3UW | 233 623 |
| 3BB | 214 581 |
| 3ARD | 216 569 |
| 3NN | 177 548 |
| 3AXT | 214 536 |
| 3EE | 216 528 |
| 3OM | 220 526 |
| 3TG | 145 413 |
| 3ATP | 148 410 |
| 3QH | 153 393 |
| 3AHA | 210 379 |
| 3GW | 155 359 |
| 3AUL | 151 353 |
| 3XS | 150 323 |
| 3AFJ | 128 310 |
| 3AKT | 271 310 |
| 3WM | 60 166 |
| 3HE | 89 195 |
| 3ZU | 76 182 |
| 3DV | 66 172 |
| 3AAN | 51 144 |
| 3AFT | 13 145 |
| 3ATR | 50 144 |
| 3KV | 41 139 |
| 3ZS | 71 133 |
| 3ALK | 50 135 |
| 3ABP | 19 130 |
| 3YQ | 47 118 |
| 3AHN | 42 119 |

Open—

| Cont. Pts. | Cont. Pts. |
|------------|------------|
| VK5ALZ | 574 |
| 3APJ | 239 525 |
| 3AAU | 171 356 |
| 3XE | 82 177 |

SAKJ—Disqualified

C.W.—

| Cont. Pts. | Cont. Pts. |
|------------|------------|
| VK5KX | 28 38 |
| 3AQF | 186 281 |
| 3RJ | 108 280 |
| 3AKN | 189 261 |
| 3CX | 22 68 |

QUEENSLAND

Top Six Logs—

| | | |
|-------|-----|--------|
| VK4DP | 919 | points |
| 4RH | 652 | " |
| 4DX | 509 | " |
| 4TR | 500 | " |
| 4BQ | 451 | " |
| 4PS | 425 | " |

Phone—

| Cont. Pts. | Cont. Pts. |
|------------|------------|
| VK4UX | 228 669 |
| 4TR | 199 659 |
| 4BQ | 185 451 |
| 4PS | 141 425 |
| 4BZ | 194 395 |
| 4LT | 161 365 |
| 4HC | 155 349 |
| 4LJ | 142 297 |
| 4EH | 80 232 |
| 4ZZ | 101 223 |
| 4ZL | 221 211 |
| 4NS | 112 192 |
| 4WS | 109 191 |
| 4KU | 60 134 |
| 4OV | 51 122 |
| 4ZB | 28 108 |
| 4RL | 51 106 |
| 4DO | 46 101 |

Open—

| Cont. Pts. | Cont. Pts. |
|------------|------------|
| VK4DP | 357 919 |
| 4RH | 254 652 |
| 4TR | 103 258 |

C.W.—

| Cont. Pts. | Cont. Pts. |
|------------|------------|
| VK4XW | 101 251 |
| 4ZL | 96 207 |
| 4PS | 63 198 |
| 4KE | 65 158 |

SOUTH AUSTRALIA

Top Six Logs—

| | | |
|-------|------|--------|
| VK5NO | 1388 | points |
| SWO | 1045 | " |
| 5FV | 907 | " |
| SZK | 807 | " |
| STC | 660 | " |
| 5MS | 642 | " |

Phone—

| Cont. Pts. | Cont. Pts. |
|------------|------------|
| VK5FT | 322 859 |
| 5JK | 300 807 |
| 5MS | 222 642 |
| 5QX | 235 622 |
| 5DQ | 186 592 |
| 5ZB | 146 464 |
| 5EQ | 146 406 |
| 5TN | 188 370 |
| 5XM | 141 369 |
| 5AV | 150 359 |
| 5VG | 103 354 |
| 5LG | 106 354 |
| 5DC | 136 333 |
| 5IM | 107 316 |
| 5TM | 128 289 |
| 5ZG | 125 255 |
| 5EN | 82 249 |
| 5DF | 93 196 |
| 5LC | 60 195 |
| 5PM | 73 193 |
| 5OS | 12 14 |
| 5WV | 70 13 |
| 5WW | 6 11 |
| 5NW | 42 131 |

Open—

| Cont. Pts. | Cont. Pts. |
|------------|------------|
| VK5NO | 474 1389 |
| SWO | 349 1045 |
| 5JK | 307 907 |
| 5TG | 181 494 |
| 5WC | 174 423 |
| 5EP | 133 383 |
| 5CV | 67 185 |

C.W.—

| Cont. Pts. | Cont. Pts. |
|------------|------------|
| VK5FT | 163 457 |
| 5XK | 137 344 |
| 5AD | 105 322 |
| 5KU | 120 326 |
| 5JF | 45 105 |
| 5KO | 34 95 |
| 5RX | 30 93 |
| 5BZ | 28 88 |

Phone—

| Cont. Pts. | Cont. Pts. |
|------------|------------|
| VK5NO | 249 592 |
| 5JK | 230 530 |
| 5AR | 221 523 |
| 5AD | 160 367 |
| 5RV | 152 342 |
| 5PH | 145 342 |
| 6ZZ | 137 323 |
| 6MK | 130 293 |
| 6WL | 114 273 |
| 6RG | 115 271 |
| 6TH | 103 271 |
| 6CR | 102 241 |
| 6QL | 109 238 |
| 6XG | 98 218 |
| 6XO | 92 214 |
| 6YV | 94 203 |
| 6TR | 85 166 |
| 6GH | 62 159 |
| 6GG | 59 148 |
| 6KJ | 67 141 |
| 6KS | 52 139 |
| 6WV | 51 138 |
| 6RO | 49 130 |
| 6AG | 55 133 |
| 6LG | 55 123 |
| 6DQ | 58 120 |
| 6GM | 59 120 |
| 6NP | 50 109 |
| 6ZG | 57 101 |
| 6GU | 36 79 |
| 6CP | 34 77 |
| 6TK | 39 76 |
| 6HS | 32 68 |
| 6RI | 32 68 |

Open—

| Cont. Pts. | Cont. Pts. |
|------------|------------|
| VK5RU | 303 858 |
| 6JK | 27 228 |
| 6VK | 94 208 |

C.W.—

| Cont. Pts. | Cont. Pts. |
|------------|------------|
| VK5SM | 135 858 |
| 6WW | 34 101 |
| 6AS | 22 57 |
| 6RS | 10 26 |
| 6UF | 14 26 |
| 6EE | 7 14 |
| 6IG | 9 28 |
| 6ZO | 7 20 |
| 6AJ | 7 20 |

Phone—

| Cont. Pts. | Cont. Pts. |
|------------|------------|
| VK5RA | 545 858 |
| 5QX | 535 858 |
| 5DQ | 525 858 |
| 5EN | 515 858 |
| 5DF | 505 858 |
| 5LC | 500 858 |
| 5PM | 495 858 |
| 5WW | 485 858 |
| 5NW | 475 858 |
| 5LG | 465 858 |
| 5EP | 455 858 |
| 5CV | 445 858 |
| 5JF | 435 858 |
| 5KO | 425 858 |
| 5RX | 415 858 |
| 5BZ | 405 858 |
| 5JF | 395 858 |
| 5TK | 385 858 |
| 5PH | 375 858 |
| 5DS | 365 858 |
| 5DQ | 355 858 |
| 5EN | 345 858 |
| 5DF | 335 858 |
| 5LC | 325 858 |
| 5PM | 315 858 |
| 5WW | 305 858 |
| 5NW | 295 858 |
| 5LG | 285 858 |
| 5EP | 275 858 |
| 5CV | 265 858 |
| 5JF | 255 858 |
| 5KO | 245 858 |
| 5RX | 235 858 |
| 5BZ | 225 858 |
| 5JF | 215 858 |
| 5TK | 205 858 |
| 5PH | 195 858 |
| 5DS | 185 858 |
| 5DQ | 175 858 |
| 5EN | 165 858 |
| 5DF | 155 858 |
| 5LC | 145 858 |
| 5PM | 135 858 |
| 5WW | 125 858 |
| 5NW | 115 858 |
| 5LG | 105 858 |
| 5EP | 95 858 |
| 5CV | 85 858 |
| 5JF | 75 858 |
| 5KO | 65 858 |
| 5RX | 55 858 |
| 5BZ | 45 858 |
| 5JF | 35 858 |
| 5TK | 25 858 |
| 5PH | 15 858 |
| 5DS | 5 858 |

TASMANIA

Top Six Logs—

| | | |
|-------|---------|------------|
| VKTMS | 307 807 | HOT points |
| 7AI | 277 807 | 7WA |
| 7SF | 284 650 | 7CA |
| 7RL | 260 627 | 7BT |
| 7GC | 127 310 | 7ZB |
| 7DS | 110 310 | 7RD |
| 7MX | 148 306 | 7MY |
| 7TK | 132 265 | 7JP |
| 7CK | 44 173 | 7WI |
| 7DS | 91 155 | 7P |
| 7TB | 72 147 | 7T |
| 7RQ | 22 147 | 7TC |
| 7AB | 20 45 | 7CF |
| 7JD | 15 43 | 7LR |

Phone—

| Cont. Pts. | Cont. Pts. | Cont. Pts. |
|------------|------------|------------|
| VKTMS | 307 807 | VKTPF |
| 7AI | 277 807 | 7WA |
| 7SF | 284 650 | 7CA |
| 7RL | 260 627 | 7BT |
| 7GC | 127 310 | 7ZB |
| 7DS | 110 310 | 7RD |
| 7MX | 148 306 | 7MY |
| 7TK | 132 265 | 7JP |
| 7CK | 44 173 | 7WI |
| 7DS | 91 155 | 7P |
| 7TB | 72 147 | 7T |
| 7RQ | 22 147 | 7TC |
| 7AB | 20 45 | 7CF |
| 7JD | 15 43 | 7LR |

C.W.—

| Cont. Pts. | Cont. Pts. | Cont. Pts. |
|------------|------------|------------|
| VKTSM | 155 446 | VKTGV |
| 7ZA | 131 310 | 7ZB |
| 7ZD | 131 314 | 7OM |
| 7RY | 83 201 | 7CH |

PAPUA/NEW GUINEA

| Cont. Pts. | Cont. Pts. |
|------------|-------------|
| VK5GM | 244 690</td |



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*and we would like to do
more business with you*



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- Guaranteed replacement windings at a fraction of the cost of the complete part, yet fitted in minutes.
- Fair and reasonable trading terms.



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35 Mount St., Burnie, Tas.
Edmunds Bros. Pty. Ltd., 270 Lonsdale St., Melbourne.

TELECOMPONENTS PTY. LTD.

A UNIT OF THE FERRIS GROUP OF COMPANIES

NATIONAL FIELD DAY CONTEST, 1962

Dates: Saturday, 10th, and Sunday, 11th February, 1962.

Duration: Saturday, 1800 to 2300 hrs. Sunday, 1000 to 1600 hrs.

Objects: The operators of Portable and Mobile Stations within all VK Call Areas will endeavour to contact other Portable/Mobile and Fixed Stations in Australian and Overseas Call Areas.

RULES

1. There shall be five sections in the Contest:

- (a) Portable/Mobile Transmitting, Phone.
- (b) Portable/Mobile Transmitting, C.w.
- (c) Portable/Mobile Transmitting, Multiple Operators, Open only.
- (d) Fixed Transmitting Stations working Portable/Mobile Stations, Open only.
- (e) Reception of Portable/Mobile Stations.

2. All Australian Amateurs may take part. Mobile or Portable Stations shall be limited to an input of 25 watts to the final stage. This power shall be derived from a self-contained and fully portable source. A Portable/Mobile Station shall not be located within one mile radius from the home(s) of the operator(s), nor be situated in any occupied dwelling or building.

Portable/Mobile Stations may be moved from place to place during the Contest.

No apparatus shall be set up on the site earlier than 24 hours prior to the Contest.

All Amateur bands may be used, but no cross-band operating is permitted.

3. Amateurs may enter for either (a) or (b), or both, in the Portable/Mobile sections.

4. One contact per station for phone and one for c.w. per band is permitted.

5. Entrants must operate within the terms of their licences and in particular observe the regulations with regard to portable operation.

6. Serial numbers consisting of RS or RST report plus three figures commencing with 001 and increasing by one for each successive contact shall be exchanged.

7. Scoring:

(a) Portable Mobile Stations:

- For contacts with Portable/Mobile Stations outside entrant's Call Area 15 points
- For contacts with Portable/Mobile Stations within entrant's Call Area 10 points
- For contacts with Fixed Stations outside the entrant's Call Area 5 points
- For contacts with Fixed Stations within the entrant's Call Area 2 points

(b) Fixed Stations:

- For contacts with Portable/Mobile Stations outside entrant's Call Area 15 points
- For contacts with Portable/Mobile Stations within entrant's Call Area 10 points

8. The following shall constitute Call Areas: VK1 and VK2 combined,

VK3, VK4, VK5 and VK8 combined, VK6, VK7, VK9 and VK0.

9. All logs shall be set out under the following headings: Date/Time (E.A.T.), Band, Emission, Call Sign, RST/No. Sent, RST/No. Received, Points Claimed. Contacts must be listed in numerical order.

In addition, there shall be a front sheet showing the following information:

Name Address
Call Sign Section

Call Sign of other operator(s) (if any).....
Location of Portable/Mobile Station.....
From hours to hours
From hours to hours

A brief description of equipment used, bands used and points claimed, followed by the declaration:

"I hereby certify that I have operated in accordance with the rules and spirit of the Contest."

Signed Date

10. The right is reserved to disqualify any entrant who, during the Contest, has not observed the Regulations and the Rules of this Contest or who has consistently departed from the accepted code of operating ethics.

11. The decision of the Federal Contest Committee of the Wireless Institute of Australia is final and no disputes will be entered into.

12. Certificates will be awarded to the highest scorer in each Call Area. Additional Certificates may be issued at the discretion of the F.C.C.

13. Return of Logs:

All entries must be postmarked not later than 10th March, 1962, and addressed to the—

Federal Contest Committee, W.I.A.,
Box 851J, G.P.O.,
Hobart, Tasmania.

RECEIVING SECTION

14. This section is open to all Short Wave Listeners in VK Call Areas. The Rules shall be the same as for the Transmitting Stations. Logs shall take the same form as for Transmitting Sections, but will omit the serial number received.

Logs must show the Call Sign of the Station heard, the serial number sent by it and the Call Sign of the Station being worked.

Only one lot of points can be claimed for any one contact between two stations, for example: VK2AA/P calling VK3XX/P and exchanging numbers. Points can be claimed only for VK2AA/P working VK3XX/P. NO points can be claimed for VK3XX/P working VR2AA/P during this particular contact.

Scoring will be on the same basis as for Transmitting Stations. It will not be necessary to log a station calling CQ. A station may be logged once only for phone and once for c.w. in each band.

Awards.—Certificates will be awarded for the highest scorer in each Call Area.

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100 Kc. and 1000 Kc. Frequency Standard,
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High frequency transistors for cordless radio receivers

One of the most important recent advances in transistor technology is the alloy-diffusion technique used by Mullard. This technique provides transistors with uniform high frequency characteristics and enables the design of low cost cordless radios of superior performance.

OC169 - OC170 - OC171

| Transistor Type | OC169 | OC170 | OC171 |
|---|-------------------------------|--------------------------|----------------|
| Collector Voltage (Vcb max.) | -20 | -20 | -20 V |
| Collector Current (Ic max.) | 10 | 10 | 10 mA |
| Max. Dissipation (25°C) | 80 | 80 | 80 mW |
| Typical parameters at (measured at Vee = -6V, Ic = 1mA) | 0.45 { common emitter } | 10 { common base } | 100 Mc/s |
| Input Conductance | 0.4 | 2.5 | 23 mmhos |
| Input Capacitance | 80 | 65 | -6 pF |
| Feedback Admittance | < 100 | 100 | 600 μ mhos |
| Transfer Admittance | 36 | 32 | 14 mA/V |
| Output Conductance | 7 | 60 | 350 μ mhos |
| Output Capacitance | 7 | 4.5 | 2.6 pF |
| Ideal Unilateralised power gain | 61 | 32 | >10dB |



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MT117X

Correspondence

Any opinion expressed under this heading is the individual opinion of the writer and does not necessarily coincide with that of the publishers.

S.B.—COMMENTS ON EDITORIAL

Editor "A.R." Dear Sir,
As one of the pioneer s.s.b. operators in this country with over ten years of s.s.b. operation on 14 Mc., my reading of the Editorial in the October issue of "A.R." has prompted me to write this letter. It would appear that the Federal Executive, over the course of time, the Editorial appears is completely out of touch with s.s.b. operation on the 14 Mc. band.

The history and present set-up of 14 Mc. s.s.b. operation is as follows:

Early VK and overseas s.s.b. work was done between about 14,300 and 14,200 Kc. Early W operation took place anywhere in the W phone band.

By 1953 the W s.s.b. stations had congregated between 14,300 Kc. and the s.s.b. operators elsewhere had moved up to the 14,300-14,350 Kc. section of the band, or operated inside the W phone band, a course which in the early days of s.s.b. was a necessity, as often s.s.b. was never listened outside their phone band. This set-up existed until 1959, when a move was initiated by the U.S.A. to extend the upper limit of the W phone band to 14,350 Kc.

The proposed move was by no means popular, either inside the U.S.A. or elsewhere, and many s.s.b. and amateur individuals, both in the U.S.A. and in other countries, put their views in writing, both to the F.C.C. and the A.R.R.L., stating what they considered the consequences would be. However, the W phone band was retained, as proposed, early in 1960, to cover the 14,300-14,350 Kc. range.

There followed a period of utter chaos amongst the s.s.b. fraternity, over the whole globe for the best part of six months, in the face of an avalanche of W signals, into the 14,300-14,350 Kc. section of the band. Unrest, confusion, uncertainty, and the onset of the signal appeared to be originated by operators with hoggish manners, and absolutely no courtesy. The law of the jungle truly prevailed.

QSOs were rudely broken into with squarks of "weak break," not by one operator but by many, most of whom were never heard of again after they were given a report. A QSO that you commenced with another station in the U.S.A. would, very likely, be completed with six or more stations, without so much as "by your leave," one of whom, frequently would appoint himself as M.C. of the whole set-up.

As often as not the original stations, (1) shut down in disgust, (2) shifted to another channel, or (3) went into permanent silence, if they chose, told the inconsiderate ones in no uncertain terms to clear off and continued their QSO.

Many operators, including the writer, almost entirely gave up for some months and did a large amount of listening in an endeavour to evaluate the situation, and slowly but surely a workable pattern clearly emerged.

The European s.s.b. operators, because of their geographical location, were amongst the hardest hit. VK and overseas s.s.b. many were below 14,200 Kc. and finally congregated in the 14,100-14,130 Kc. section of the band. Many operators in other countries all over the world followed suit, to escape the W QRM, and after all there are over 200 other countries in the world to work besides the U.S.A.

The Ws meanwhile, and A.R.R.L. described what was happening in their phone band and looked with a certain amount of disfavour on the 14,100-14,130 Kc. activity, as being too far away from the phone band.

The 15 Mc. DX s.s.b. segment of hand stems from the foregoing situation, one which they were warned about would happen, but they still brought on. There was no need to extend the DX band up to 14,350 Kc., a 14,350 Kc. limit, similar, could have given them what they now seek, but they would not be told, and unfortunately there are enough inconsiderate operators in W (and not only in W land) that a clear 15 Mc. segment in W land, unless made to be of practical use, would be a complete waste.

Secondly, there are so many s.s.b. DX stations and s.s.b. stations active from exotic DX locations these days, that VKs, ZLs and others wish to QSO as well as the Ws, that from that angle alone VK very often would be unpopular operating in that small segment of band should some of these stations be there,

and almost always there are now a few of them about.

Again, on 14 Mc., upper sideband is transmitted, so a conscientious operator with a decent transmitter, would have to keep at least 3 Kc. off from the band edge. One could guarantee that at the 14,335 Kc. edge of the segment there would be splatter from stations pushing the "band limit" below 14,335 Kc., so the 15 Mc. band would be really narrower than what it would first appear.

At the present set-up is as follows:

S.s.b. operators who wish to keep clear of W QRM, and work other DX, or work only on W stations, will time usually operate around 14,100-14,130 Kc. Those interested in W QSOs specify the frequency on which they intend to listen for replies. Operators anxious to engage in round-tables, W QSOs, or who wish to contact DX and other stations working in the W band, should, themselves, operate inside the W phone band, either on, in the case of round-tables, or adjacent to, in the case of DX, the frequency of the other station.

A few operators are sometimes found around 14,200 Kc. but not many. However, W s.s.b. operation can now be frequently heard from 14,200-14,350 Kc. over the full width of their band.

VK s.s.b. activity is growing rapidly. Frequently of arranging themselves more VK W stations than are even audible on the band back in Sydney, and while I think of it, F.E. neither I, nor any s.s.b. operator I have mentioned the matter to, has heard any of you active on s.s.b., either on 14 Mc. or any other band.

—N. Southwell, VK2ZF.

F.E. COMMENT ON VKZFS'S LETTER

Editor "A.R." Dear Sir,
First let me correct Mr. Southwell's impression concerning my point of view in the Editorial. It was meant to imply that all s.s.b. operators in Australia should restrict their operations to the "top 15"—if such impression was created, we apologise as this was certainly not the intention. In fact, the Executive attempt to convey such policy without the proper authority of the Federal Council.

It is well known that in the U.S.A. stations are required, by regulation, to operate within specific bands or of an amateur's choice. This has been found necessary by the F.C.C. to serve some sort of order for the large proportion of the world's Amateurs who reside there. We, in Australia, are in a much more fortunate position in that our subdivisions, while our bands are not regulated by the assigning authority. The present voluntary subdivisions in our bands are the results of lengthy and detailed consideration by the Federal Council—the subdivisions incidentally, being between phone and c.w. bands.

In the case of 14 Mc., the subdivisions are 14-14.1 Mc. for c.w. exclusive, and 14.1-14.35 Mc. for phone emissions which include a.m., n.f.m., p.m., d.s.b. and a.s.b. The Editorial, with the usual talk for granted, referred to what any Australian s.s.b. operator at the top end of the 14 Mc. band should follow the A.R.R.L. recommendations, and for their convenience, and yours, not work any A.M. stations in the "top 15". The wisdom or otherwise of the A.R.R.L. in making these suggestions is not for me to say without a full knowledge of all the facts that led thereto, but I believe that this recommendation was not lightly made, and the Executive therefore is entombed to pass on the recommendation to all s.s.b. operators.

If they choose to ignore the Editorial, that is their business; but do not forget later that the "top 15" restriction on the American side has been denied to us and other Amateurs throughout the world. A little bit of extra band space is surely always welcome.

—Major W. Mitchell,
for Federal Executive.

SUNSPOT ACTIVITY

Editor "A.R." Dear Sir,
Most of us are aware that solar activity plays a major part in the propagation of Radio signals from one part of the solar system to another, and that the level of sunspot activity is in the form of sunspot numbers.

It should interest all concerned that there is a period of low sunspot numbers almost with us and it is anticipated by overseas authors that such a period will reach its minimum in 1965. (By way of comparison, the sunspot number for January 1961 was 51. It can be seen, therefore that reception difficulties on the higher frequencies in particular will become increasingly worse during the next three years or so.)

With the above in mind, it will be necessary for all Amateurs to keep in thought the fact that during the period concerned the ionos-

pheric layers will become less dense because of a lowering of solar activity and this, in turn, will result in the m.u.f. for h.f. communication becoming progressively lower and the available frequencies for such communication becoming less and less.

Our 3.5 Mc. band should be much in demand from now on, both by day and by night until such time as the present trend towards zero sunspot minimum continues.

—Eric W. Treblecock, BERS19S.

R.D. CONTEST OPERATING

Editor "A.R." Dear Sir,
I have read with a certain amount of amusement, and some letters in your columns moaning about the rough tactics of some operators in the R.D. Contest.

It seems strange that the operators who really score well do not moan about the rest—after all, they spend the most time on the air and also the most time in the position to comment on what should or should not be done.

I must admit I really enjoy participating in this Contest. Apart from the continual battle of tactics in endeavouring to get through the noise, the sheer excitement back stage leaves many memories of war years, of friends who never came back, of the thousands who threw themselves into the maelstrom of war in search of freedom—freedom for us to mean and wings.

Even R.D. Contest teaches me something—it shows me in no uncertain terms that I must improve something—maybe it's the changeover switching this time, the netting another time, the band end, the receiving selectivity, etc. Perhaps our disgruntled friends could adopt the same objective attitude they could improve their gear (and their outlook) to such a point that they wouldn't find it necessary to complain about some naughty boys treading on their toes.

I will admit there are a few signals which don't come up to modern standards, but I would hesitate to condemn those concerned. I would rather say "thank You" to them for at least making the contest join in. I would also say that if you yourself can honestly plead not guilty to putting a bad signal on the air at some time or other then you are either a commercial rig tycoon or you just haven't got the right components. I mean this like a candid, but accurate, report on his signal, but components will break down at the most awkward times.

In conclusion, I would like to pass my regards to all my once-a-year friends. See you again in the next R.D.

—G. W. Groves, VK1XU.

P.S.—The rules of the R.D. Contest do not specify the wearing of kid gloves.

THE LAZY Z CALLS

Editor "A.R." Dear Sir,
"What do others think?" Well, I find that Peter VK3PF has adopted a very narrow point of view on the Z calls. Perhaps he can't understand that some people are more content to work v.h.f. than the lower frequencies.

A Z call is the easiest way to obtaining a full license. However, intervening factors to work on the code. However some operators find the "call of the wilds" on v.h.f. stronger than c.w. and become quite content to become good v.h.f. operators, which in fact requires far more technical skill. I have had the great pleasure of saying to my many fellow Z calls that get more kick out of working VK3s and JAs from VK3 on 6 m. than lower freq. types get from working Yanks on 26—after all, it doesn't take much effort to get on the air.

"What a boost they could give to the lower frequencies." It seems to me the lower frequencies don't need any boosting—take 40 m. on a busy evening, you can't find a speech cycle! So don't leave those happy v.h.f. Z calls to fill the empty spaces of 6 and 2 m. where there is plenty of room.

The suggestion that the Limited licence made current for one year only is a very selfish one. It could indeed deny the use of the bands of Amateur Radio to us, including myself, who are enjoying it today, for they just would not deem it worthwhile to make the effort to take the exam, under those circumstances.

Even now, though I find myself in the position of having passed the c.w. exam, and awaiting my limited licence, I am at a majority of my own operating, will still be plied on the v.h.f.'s, and I think this is the attitude of a lot of other Z calls.

For the year only, there would be no incentive to operate if they were to pass the c.w. within 12 months, so why give them a call sign at all?

To summarise, I think the Z licence is a very worthwhile step forward from the old system, because—

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V H F

David Tanner, VK3AAU
17 Wolesey Street,
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By the time you read these notes I shall be well on my way to the land of VK5. I expect to be in Alice Springs on Saturday 1st Dec. I will be using a.m. or c.w. on 50.49 Mc. and will be on the air from about 8 o'clock or so. I will be driving north toward Darwin for the next couple of days, so if conditions are all good, I may be able to work DX. The rig will either be VK3AAU/5 or VK3AU. The rig will be running about 60w. on c.w. or carrier controlled a.m. Operation from Batchelor will commence soon after I arrive, both in the evening and also dinner time, whenever time permits to be.

I hope to be on the other bands some of the time as well, in particular on 30 mx during Sunday morning, to swap information with anyone who cares to.

DX on 6 mx seems to be very slow in making a start, but I expect to hear reports of any Interstate openings. I believe the boys up north have been getting a few openings to Japan again, but only a few weak JA signals have been heard elsewhere.

This year's Ross Hull Contest should be quite interesting, particularly from the point of view of "local contacts". I would like to ask all participants to send in their logs, no matter how small they are, and also include any comments you care to on the rules at the same time. In this way, the F.C.U. will have the ideas of those who are particularly interested in the Contest, quite early in the year and have plenty of time to digest them before they make up amendments to the rules. The number of logs sent in previous years has been a bit disappointing, so I am about seeing what you can do about it this year.

Lastly, I would like to thank all the chaps who have sent their notes to me during the past year. Bill 3ARZ will be taking over from me in Jan. so give him my regards. Bill is a man of many progressive ideas and has given the VK3 Group a good lift, and he is quite keen on taking over the notes. All the best for the Christmas and New Year DX and I'll see you from VK5—SAAU.

NEW SOUTH WALES

50 Mc.—About 20 or more local stations are active on this band with a few more listening. There are many more in the country also, but no DX yet.

A good deal of activity and a number of new stations have appeared. Renewed activity in the Gosford-Newcastle area is providing consistent signals into Sydney. Doug 2WZL is the strongest signal from this area. Doug 2WZL has been heard by Sydney stations recently on Wednesday and Sunday nights.

22ZG at Ungarie is also trying to work into Sydney. Geoff is running about 150w. high. Frequency is 144.00 and times are 0630 to 1400 hrs. on Sunday and 2100 hrs. on Wed., Sat. and Sun.

New stations heard in Sydney are 2ZJE at Guildford, 2ZWG at Cordell Park, 2ZRA at Long Jetty and 2ZRB at Fairlight. 2ZRA has held a meeting recently. The Sydney Group was held on 23rd. Barry 2ZAG showed some films he had taken on his recent trip to Japan and gave some of his impressions of Amateur Radio in Japan. The Dec. meeting will be on 1st. Dec. at 8 p.m. at the Hotel Grand Chancellor. Bring along surplus gear with Jim 2PM and Bob 2OA as auctioneers. There will be no meeting in Jan.

The October fox hunt was on Wed. 25th with Eric 2ZDP as the fox. It finished at Kyle on the Georges River. The Dec. 2nd meeting will be on 28th. After coming 10 miles, Jim 2PM with 12 miles was second, followed by Dave 2AWZ who was solo. Many of the hounds crossed the river and got bushed on the other side. A special medal for Alan 2ZCS who was last seen heading off 100 degrees out of phase and is still hunting. December hunt with Barry 2ZAG will start at Top Ryde and will finish with a Christmas get-together.

Merry Christmas and a happy New Year will be on Sunday, 17th Dec. at 8 p.m. The Mid-Summer Field Day on Sunday, 31st Dec., will be a points per mile contest held during the afternoon and evening. Details on the broadcasts.

VICTORIA

50 Mc.—During the month of Oct. the band has been very quiet, following much the same pattern as the winter months. George 3ZCG at Morwell on 50.16 Mc. and Stan 3ZAB at Traralgon on 50.45 Mc. look to the north for DX, each having one or two QSOs at Morwell by joining them as soon as his band is finished. On 16th Oct. between 2130 and 2200 hrs. E.A.S.T. 3ZBN and 3ZDK heard some JA signals but were unable to identify the call signs. On 30th Oct. Jim JAZY at Frankston worked David 3ZW on 50.16 Mc. on 2 mx with 9 plus signals, so they tried 6 mx and had a two-way contact with 5 and 8 rigs.

Bill JXE at Hexham reports quite a bit of 6 mx activity down in his part of VK5, including a few contacts on 3PZ. 3ZBR, 3ZER, 3AKN and SANQ. A new station on this band is Ian 3ZMM, located at Blackburn. Ian is running 12w. input to a 2E36 and is using a dipole as a temporary antenna. John 3ZHN now has his 30.16 Mc. on 2 mx with 9 plus signals, so it is 6 mx and had a two-way contact with 5 and 8 rigs.

The Oct. 6 mx scramble took place on Sun. 22nd, at 7.45 p.m. Once again activity was rather poor and only fifteen stations participated. Scheduled entrants did not turn up. Bert 3AET at Kilmore 3ZDZ was the winner for the evening with 13 contacts with a number of stations equal second with 12 contacts. Don't forget the next 6 mx scramble which will be held on 24th Dec. 7.45 p.m.

Particular interest has been shown during the last few weeks and quite a number of DX contacts have taken place. Some of the more distant stations to work into Melbourne were 3ZCW at Ouyen, 3ZEA at Rainbow, 3ZB at Yancey, 3ATX at Bairnsdale, 3ZB at Portland, 3ZC at Sale, 3DY at Maffra. Steve 3CI at Nagambie has reappeared on the band. George 3ZCG at Morwell worked Col 3YLZ on 144.62 Mc. at Launceston on 9th Oct. and also heard 3BQ on 144.3 Mc. Again on the 11th Nov. George 3ZCG Col but was not able to establish contact due to high level electrical interference at Col's end. Rex 3VL at Numurkah is believed to have heard 4ZCI on two metres, and I hope to get further details on this in the near future.

The stations at Geelong are very active on this band and are on each Thurs., Fri. and Sun. evenings from 1930 hrs. onwards looking for DX contacts.

The Geelong area also has quite a bit of activity. On 27th Oct. the boys had quite a feast of DX, working most of the western stations.

For the early risers on an early morning net is conducted each morning from 0630 to 0745 hrs. and to date quite a number of DX stations have been worked. Anybody who wants to join in and tuning breaks are taken between each over. The Adelaide boys are also looking eastwards at this time of morning. The far north-western stations are making a point of looking westwards to contacts each Sunday evening from 2000 to 2100 hrs.

New stations on this band include Graham 3QZ at Traralgon on 144.43 Mc., John 3ZKO at Meeniyan on 144.35 Mc. and Daryl 3ZNC at Geelong on 144.54 Mc. Graham 3ZLX at Creswick is also active. Ken 3ZDZ at Croydon who has been active only on 6 mx to date, now has gear for this band and, by now, Geoff 3ZNA at Geelong should be active.

The 6 mx scramble is very interesting and about five of the states are active. 3ZAK at Geelong is way out in front in the country section with a terrific score of 161, but in the city section it is a close contest with John 3ZCG just in front with 109 pts. Michael 3ZC is very consistent with 101 pts. and Ted 3AAD is not far behind with 100 pts. The next 6 mx scramble will be held on 10th Dec. at 7.45 p.m. The average participation in these scrambles is 35. It is a pity the 6 mx scramble does not attract many entries.

The Dec. field day will be held on Sunday 17th between 1100 and 1700 hrs. so how about joining in and helping to make it a successful day. Remember the winning portable station over the series will receive a complete SCR522 portable transmitter.

All you have to do is advise Bill 3ARZ of your total claimed score before the next week-end.

The Dec. fox hunt will be held on Wed. 13th, commencing at 8 p.m. and will start from the Melbourne City Crescent at the rear of the Melbourne University building.

The Oct. v.h.f. Group meeting, held on 18th, was quite successful and approx. 40 members attended to hear an excellent talk from Phil JAFB on v.h.f. communication in aviation, and to see two exciting films. The next meeting will take place on Wed. 20th in the Victory Publicity Building, commencing at 8 p.m. and will take the form of an open night.

Don't forget that news for the Sunday morning meetings will be in "A.R." and items in the "Merry Christmas" section will be on Sunday, 17th Dec. at 8 p.m. The Mid-Summer Field Day on Sunday, 31st Dec., will be a points per mile contest held during the afternoon and evening. Details on the broadcasts.

QUEENSLAND

The only news from this part of the world comes from Dane 4ZAX who is in business on 144.00 Mc. He has four 24 ft. long yagis, a high powered transverter using 2B3/200 and some rather odd converters which include a 1000 watt amplifier and a 1000 watt pre-amplifier. Dane reckons that the bird-speech will only stand up for a couple of months and he is looking for skeds with southern gentlemen suitably equipped. Sideband and c.w. facilities are both available.

SOUTH AUSTRALIA

50 Mc.—This band has been quiet this month, two stations listen during the midday period; 5ZMK at Wasleys and 5ZBR at Gawler; but as yet no DX has been heard. SJH goes out periodically and has a portable for pre-summer. Dane reckons that the bird-speech will only stand up for 30-40 miles.

Two metres has been reasonable. 5ZDR has skeds every evening with 5AW at 2000 hrs. C.S.T. and 3JNN at 2030 hrs. C.S.T. 3NN is worked more often than 5AW, but the latter works more often on the evenings of 5th with 5ZDR and again at 0700 hrs. next morning by 5ZDR and 5ZCR.

Keith 5ZMK is now running 120w. on 144 Mc. and is excellent copy in Adelaide. In Adelaide there are 40 million people and 5ZCR has regular skeds with VK6 at 2000 hrs. on 144 Mc. but ar yet no go.

At least two Adelaide stations, 5TN and 5ZCR have built xtal markers using 5 Mc. Mc. As a result of the 5ZCR work, 5ZCR has produced "Oscar", the American satellite on that freq. These 145 Mc. markers would be handy for listening to the VK5 beacons on 145 Mc.

One metre has only one regular station on xtal control, but the mod. osc. boys had a remarkable day on 28th and 29th Oct. when a number of portable stations were made (good tropospheric conditions).

Brian STN is experimenting with a new final amplifier on 50 Mc. using a 100T7. Brian is also talking about a 4-256A on 144 Mc. 5ZCF worked skeds on 144 Mc. at Adelaine and Melbourne on 3rd Nov. This is the first contact from Adelaide to Melbourne. It appears that 5ZDR didn't work 5ZGD.

TASMANIA

During the coming season southern VK7 stations will be aiming at 2 mx DX for the first time. We hope to have as much success as our northern colleagues. A complete list of freq. and relevant details of VK7 interests will be circulated amongst mainland stations and country clubs have shown interest. Some of the stations concerned are 7MX 144.27, 7ZAI 144.33, 7ZAK 144.018, 7ZAD/7ZQK 144.14. There may also be some stabilised 7 mx stations cooking for DX.

At time of writing (late Oct.) southern States are participating in skeds between 3ZCG, 7LZ and others at 1930 hrs. daily; believe 7LZ and 7ZB contacted VK3 stations during mid-Oct. On 15th Nov. the VK1 V.H.F. Group operated from Mt. Pleasant, 144.167 mc. high. This is an attempt to reach portable VK3 stations in particular—we hope this proved successful. This is the first time we have been able to use a.c. power at this site—equipment used with power supply to 24 elements v.h.f. This beam will be the directional antenna for 7LZ and will make portable operations "from our best site" considerably less difficult—by courtesy of one of our tv. stations—and may provide for more 2 mx DX.

Six mx is also quite DX-wise; the only six-way on 50 Mc. heard by 7ZAI on either 27th or 28th Oct., pity none of our c.w. "experts" were on deck.

Col 3JLZ at Launceston reports some good results on 2 mx. He worked 3DV and 3ZCG on Nov. 11th and heard 3ZCG on most nights which would be strong enough for a c.w. contact. 7DZ has a good converter on 144 Mc. now and will be on soon. He is at Postina, a hydroelectric dam on the Tamar River.

Col also sends his following statistics for 144 Mc.: VK3s, 34 different stations; QSLs from 65. VK5s, two stations and two QSLs. On 28th Mc., four VK3s and four QSLs.

• • •

OFFICIAL V.H.F. RECORDS IN AUSTRALIA

As you are no doubt aware, dates of two record QSOs in the official list of VK v.h.f. records are missing (ref. p. Nov. 1961, 144.14).

I have information to hand from VKERU that the date of his QSO with JA1ANO on 50 Mc. was 1/4/65.

I have been unable to ascertain reliably the date of the 144 Mc. QSO between VK3ZCW and JA1ANO, and am therefore pre-mature in listing this as a record. However, I believe this one as I believe this distance has been bettered by VK7LZ. I will forward full details when and if I get reliable information.

—D. H. Rankin, Federal v.h.f. Manager.

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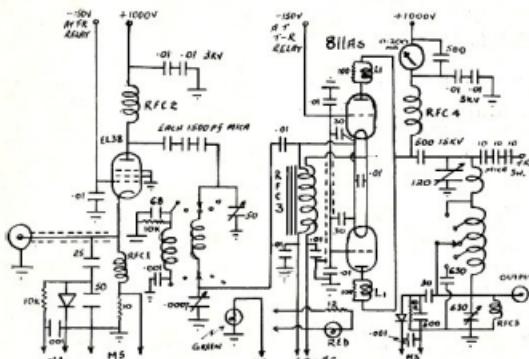
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Meter switching is used to check on r.f. input, r.f. output, cathode current on EL38 (which varies from 15 to 30 mA), and grid current on 811As (up to 25 mA). R.F. chokes 3 and 4 are not critical and are easily made. The meter for the plate current of 811As is insulated from the front panel by a sheet of celluloid. Disc ceramic 0.01 μ F condensers 3kV, mica and polyester types 1kV, 100 pF are used and two are used in series. The pentode 15kV t.v.-type condenser has a measured capacity of 800 pF, which is all to the good.

Parasitics in the 811As are eliminated by L1 shunted by a non-inductive 100 ohm resistor in each plate lead. The correct size of L1 is quite important as a larger coil did not work. 30 pF mica condensers between grid and filament at the top of each stage and adding of leads come away from the chassis is of great assistance in preserving stability. Parasitics in 811As can make the plate current soar to great heights and a very short dit can blow the fuses. Interstage pi-coupling is a further anti-resonant measure. A large tank condenser than 120 pF is desirable for 80 metres, but the results are quite good anyway.

Like all other linear, this one can flat-top and cause distortion. We have overdriven the 811As in a gradual manner with this type of amplifier however, and the result is a clean signal under most circumstances. This is not so with Class AB and ZL linear types, in my experience. Loading of 811As is adjusted so that 10 mA plate current occurs with 20 mA grid current. Good linearity with good

output is obtained at these settings. Adjustment of EL38 tank circuit has no effect on this ratio. Plate current of 811As fluctuates from 50 to 120 mA, with voice peaks. Cables connecting the linear with power supply are twisted and there is no t.v.t. plug. The 7/22 earthling wire is in nylon tubing about 4 feet long is the 6.3v. line to the power supply.

Next month it is hoped to describe the T.R. switch and a.c./d.c. rectifier circuits which also share the 811 compartment.

VH1B

The Gilbert and Ellice Islands captures up a picture of coral atolls, waving palms and dusky maidens in grass skirts, and while you and I dream of maybe having a holiday in this exotic place, to Chas. Hawker, this is home and very common place. However, Chas. has not always lived there, being a native of Victoria.

Tarawa, the capital of this island group is not the first D.P.O. station from which Chas. has called CQ. his two "homes" before this being very different indeed.

Chas. first came on the air as VK3HJN and no doubt, many will remember this call. In 1954, he went to Macquarie Island for a year and put VK3AC in the air. Not being content to have been isolated from civilization for a whole year, he went to the Antarctic Continent in 1957 and wintered over at Davis Base, this time operating the Amateur bands as VK6AB.

Two and a half years ago, Chas. went to Tarawa to take over the maintenance and installation of communication facilities in these islands. On the Amateur side he began on G.W.M. and later on with seven modulation, the call sign this time is VH1B.

VOX ANTI-TRIP

While looking through a bunch of R.S.G.B. Bulletins, I came across a letter which will be of interest to many. This is a different method of effecting anti-trip in the vox circuit. In part the letter from GSHRH reads:

"The method of the microphone amplifying chain is a variable-mu pentode type 56A which is operated as a normal voltage amplifier. The grid of this valve is returned to a negative bias derived from the receiver a.f. stages. The operation is in effect a form of anti-trip. The author finds that much finer range of anti-trip control can be obtained by such a method."

I assume that "the second control" in the microphone amplifying chain is not the vox section. This idea has interesting possibilities as many receivers in use today employ audio-detector a.v.c. which could be used as a source of control voltage.

SEE YOU UP TWO

Inspired by Col Harvey's (2AQU) excellent article in "A.R." August 1961, I obtained a pair of crystals for my BC348 receiver and the results are very satisfying. This receiver was already double-converted using 916 Kc if the transmitter in the 2nd is channel selected, this half lattice filter improves the performance.

For the BC348, the crystals required are Channel numbers 878 and 880, 914.563 Kc and 916.697 Kc respectively, this is practically 21 Kc apart. The cost added from the U.S.A. at 75 cents each plus one dollar airmail being received in nine days from the date of posting the order and bank draft.

"CQ" WORLD-WIDE DX CONTEST

Sideband came into its own during this Contest when conditions were the worst experienced for a long time. A.M. signals were practically non-existent for most of the weekend, while the s.s.b. gang were in there working lots of QSOs. D.E. although became very tough on the Sunday. Support coming in.

It was pleasant to notice that most stations were transmitting good clear signals and courtesy reigned supreme. There was some rare ones to be found, HABOZ being one of the notable ones. The lack of contest spirit was in evidence also. There was almost a total lack of W/K signals, at least in Queanbeyan, during the Contest. It was a most enjoyable affair and showed VOX operations to advantage.

W.I.A. D.X.C.C.

Listed below are the highest twelve members in each section. New members and those whose totals have been amended will also be shown.

PHONE

| Call | Cer. Cnt. No. rises | Call | Cer. Cnt. No. rises |
|--------|------------------------|---------|------------------------|
| VK3RNU | 2 255 | VK6KWK | 4 206 |
| VKSAB | 45 455 | VK3SATN | 26 294 |
| VKEMK | 43 250 | VK4HIR | 12 192 |
| VKEFH | 21 250 | VK3WOW | 23 192 |
| VKFJF | 21 221 | VK3DZ | 8 176 |
| VKSWL | 14 211 | VK3GB | 50 171 |

New Member:
VK2AGH 55 102

C.W.

| Call | Cer. Cnt. No. rises | Call | Cer. Cnt. No. rises |
|-------|------------------------|-------|------------------------|
| VK3XB | 10 200 | VK3H | 218 |
| VKSXC | 20 254 | VK3SU | 18 232 |
| VKFJF | 29 264 | VK3XU | 48 213 |
| VKSNC | 19 250 | VKTZL | 17 212 |
| VK3FH | 15 228 | VK3J | 39 211 |
| VK3BZ | 6 222 | VK6KK | 41 204 |

New Member:
VK3AGH 71 197

Amendment:

| VK4SD | 52 182 | VKSJT | 54 146 |
|-------|--------|-------|--------|
| | | | |

OPEN

| Call | Cer. Cnt. No. rises | Call | Cer. Cnt. No. rises |
|--------|------------------------|--------|------------------------|
| VK3ACX | 6 289 | VK4HR | 7 233 |
| VKSRE | 8 271 | VK3HAO | 76 232 |
| VKFJF | 32 267 | VK3BZ | 4 231 |
| VKSNC | 74 225 | VK3J | 45 225 |
| VK3FH | 74 224 | VK3WL | 25 225 |
| VK3HG | 3 241 | VKTZL | 23 223 |

New Member:
VK2AGH 83 245

Amendment:

VKSJT - 63 182

NOTES

FEDERAL QSL BUREAU

Divisional QSL Managers are requested to note the corrected address for W4—
W4HYW, Mr. Thomas M. Moss, P.O. Box 20044, Municipal Airport Branch, Atlanta 20, Georgia, U.S.A.

The Rabaul Amateur Radio Club notifies its address as the Bureau for New Guinea; Rabaul Amateur Radio Club, P.O. Box 170, Rabaul, New Guinea. Apparently Papua still goes to VHFQD.

The present address of the QSL Bureau for American Forces in Germany is: DL4 and DL5 QSL Bureau, C/o. DL4VJ, Base M.A.R.S. Station, A.P.O. 130, New York, N.Y., U.S.A.

Cards from D.M. stations should be sent to D.A.R.C., Box 98, Munich 21, Germany. At one time all DL5 stations were of French nationality, now all DL4 and DL5 stations are either members of American armed forces or civilians serving in the European theater.

Since most American Hams in Germany are not members of the German national society, D.A.R.C., it is requested that your cards be sent directly to New York so that the D.A.R.C. QSL Manager is not overloaded with cards for non-member stations.

—Ray Jones, VK3RJ, Manager.

FEDERAL AWARDS

W.A.V.K.C.A.—During the past six months awards Nos. 186-185 have been issued to XZ-2TH, ONXKX, KSAHQ, XZ-2TH, KSAHQ, WAWZQ, SMCCE, W8JF, FKHJ, OKISV, W4MS, W3AJI, W8AYD, W3OCH, ZLAMO, VESTF, OKICG, W8WT, WSEJT and G14RY.

—A. Kissick, VK3KBE, Awards Manager.

NEW SOUTH WALES

The October general meeting of the N.S.W. Division was held at Science House, Gloucester St., Sydney, on Friday 27/10/61. The attendance at 8 p.m. was poor, despite the warmer weather, and the fact that a lecture of popular interest had been arranged and well publicised in the Bulletin and broadcasts. Since there was the lack of a quorum, the meeting could not be opened officially, the President invited the lecturer, Oak Stockton, VK2OO (ex-W6EWWM) to proceed.

Oak spoke at length on some aspects of Amateur Radio in the U.S.A. and outlined to the meeting the finer points of Amateur Radio in the States. At the outset he emphasised that Amateur Radio has and will continue to be a hobby which will fit in our younger members careers in trade and Electronics, and added that many of the top brass in the Armed Services of the U.S.A. are Amateurs, and that they still participate in their hobby.

With an Amateur population of 220,000 in that country, the bands are freely patronised, and he added that domestic opinion here, that average power run by the Amateurs in the U.S.A. is about 150 watts.

Oak dealt with all phases of Amateur Radio, the availability of equipment, both ready constructed and in kit form, antennas, kits, etc., enabling the young fellow to purchase gear at reasonable prices but which facility is in some manner encouraging a trend away from the genuine experimenter.

He also dealt with the Amateur participation in the satellite project "Oscar" in which the N.S.W. Division Administration have sanctioned the installation of Amateur equipment in the satellite which presumably will be put into service in the coming months.

SILENT KEY

It is with deep regret that we record the passing of:

VK2EV—Eric McCready.

VK2JP—Jack Pike.

Many questions were asked of the lectures and finally the President, Bill 2YB, tendered a vote of thanks to Oak for a most interesting discourse.

Following the official opening of the meeting routine matters were dealt with, new members admitted and our visitor for the evening, G3OGI was welcomed. Finally, the meeting closed at 10.35 p.m.

As has been customary throughout the year, meetings have been held at fortnightly intervals and have kept councillors busy until a late hour. Mainly routine matters have been dealt with during the month, the main exception being the tabling of the Recommendations of the Radio Frequency Committee. Committee work was recently released. The report brings to our attention the magnitude of the task which confronted this committee in its investigations of all the frequency spectrum, and the excellent job done by our representatives on the committee. John Walker has most capably carried on the work which had been initiated by the late John Moyle, and the thanks of all our members are extended to him.

18th ANNUAL CONVENTION

The Convention Committee have been delegated to programme for the coming Convention which will be held on the weekend of January 26-28, 1962.

The opening of the week-end will be the general meeting on Friday, which will be held at Science House, Gloucester St. at which the lecture will be given by Bob Wilson, of Strongbow-Carson Ltd., and his subject will be "Linear Amplifiers". We are expecting a large audience on this occasion, including quite a number of visitors from the more remote parts of the State.

On the following day, Saturday, it is hoped that a Dinner can be arranged, announcements regarding this will appear in later Bulletins and broadcasts.

The main event of the week-end will be the Field Day which will be held at the home of VK2WI, Quarry Road, Dural, with activities commencing at 9.30 a.m. On this day, all are to be catered for, with mobile events, transmitter hunt, mobile efficiency test, many novel contests, and displays. It is requested that you bring your family along to the day and with the family enjoy a picnic lunch. Tea and biscuits will be provided and we hope to arrange to have ice cream and soft drinks available on the ground.

We will offer this extensive programme for a nominal charge on registration.

You are advised to consult our Bulletin for fuller details.

Council extends to all members and our non-member readers the Compliments of the Season.

HUNTER BRANCH

The October meeting of the Branch was again well attended, there being 12 members, eight associates and two visitors presents. Stuart 2AR, the new Vice President, and his brothers, and received several apologies for absence. The meeting took the form of a "do it yourself" night and those to perform were Lionel 2CS, Stuart 2AYF and Keith 2AKT.

Lionel showed his crystal filter rx, Stuart a 2 m tx and the other chap had a band-sweeping thing. Not all was well with Lionel's gear and it gave quite a deal of trouble before it showed its proper form. Never mind, it gave him some good practice and he did find the b.f.o. switch. We were given some most interesting information on the various possible suppliers of crystals. Stuart made building a 2 m tx sound easy and showed how he had done it with diagrams. At the end of all this, a travelling salesman, Bob Bailey, attempted to dispose of a large quantity of small parts. He had a goodly crowd of enquirers, if not all of them parted with the hard earned shekels.

By courtesy of Reg 2AI, some candid views of members at the recent Annual Dinner were passed around. There was a company and great was the delight of those who saw themselves as others see them. I have here borrowed a phrase from our worthy President who had the temerity to send through the post a photo of me at the recent reception. I wonder why it didn't make the block in last month's "A.R." Other well built men take note—a bright on all candid photographers. You need not laugh Bob Rose, at least my 80 mx view

It was once said in these notes that a certain gentleman residing in the shadow of Sugarloaf had a potent signal on 80. Well, don't believe it. It is all absorbed by Westby's t.v. antennae. And I am sure your antenna placement is poor. Dear Reader, have you ever wished for something to banish everything from the said electronic lantern? Well here's the answer. Take one well known commercial v.o., shield it and add a small piece of coax to couple into

an ATS switch on and there you are, a perfect blanket signal. Remember, it must be shielded, well. And the t.v. set must have cost no more than 37/- If you need further details see Shannen 2ZL. He'd be delighted. You can find him disposed to sell you a carpet shampooing kit complete but without any shampoo. There are some people who actually believe door-to-door salesmen.

Our friend Harry 2AFA, now fit again after his stay in Newgate, has agreed to receive a telegram from the R.I. the other day. These days one is not allowed to transmit simultaneously on 80 and 40 and some monitoring stations are very quick and have super sensitive ears, enough to hear them. You may be thinking I am hard on Harry and that I deserve to be excommunicated (that means having your aerial cut down), but not so. The aforementioned gent was innocent. How could he have done this thing? Well, he is not employing those masts all day with his equipment! Perhaps some kind person can explain it up?

After straining to hear the Monday night broadcast on 40 mx, it is a very sad thing to have to scrape the wall down to the wall just because Jim 2AHM has done it again. And for the benefit of those chaps in Jack 2KQ, at present having some days away from the stamp machines. The relay supply at the Aberdare station is keeping 2PF off the air but I am told it features in the current seven-year plan.

Tony of Lakeside residence is not so sure that the fitting of a twelve foot whip perhaps is a better move for a dormer window. It seems that way nevertheless because twice now this has happened and Tony is beginning to consider the fitting of a collapsible version. Come to think of it, this would go well with the stamp machine which is it attached to. It does have the only rack mounted ARI though, just behind the passenger's seat.

It seems remarkable the number of people who try to avoid me now that I have a large notebook. One such was Les 2EJ who sent a grating smile and an electrician's picket fence smile and muttering something about sausages for tea as I walked into a well known wholesale house the other day. How was I to know that it was a cunningly designed 144 snoop loop for use at the Blue Mountains Field Day. Anyways, I am not going to let this teach him to ignore those who have influence.

The other night only two chaps answered the call back from 2AWX. And so, it had to happen, the frequency was changed to 80 m and the frequency increased. All the old regulars may now be heard again reporting on the signals. So all you chaps who are not in the know, and I am told that there are some misguided souls who do read this column, listen to the 80 m band and you will be in.

The loudest signals of course are from Mary 2MW and Dave 2E2, so what about some of you other chaps from the mulga calling in on Mondays round 7.30.

Les 2AJE has given up signing autographs since his picture appeared in "A.R.". He now signs his photo to the said copy in the magazine. By the time this appears, Bill 2XT should have finished scaling Fujiyama and be on his way to another destination. Who will be there for the Christmas meeting is not known but even if he is not, the rest of us will be there and you are all invited to come

W.I.A., N.S.W. DIVISION

TWELFTH ANNUAL

CONVENTION



A FIELD DAY

will be held at

QUARRY ROAD, DURAL
on

SUNDAY, 28th JAN., 1962



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COMPETITIONS
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QSL BUREAU
DEMONSTRATIONS



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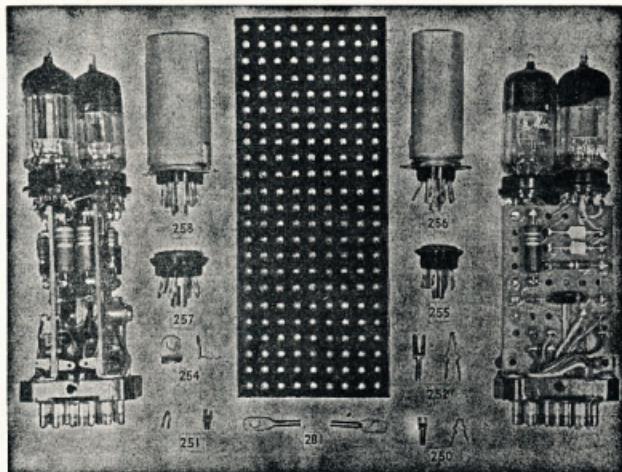
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along and see what happens. There will probably be films of some sort and Bob 2AQF will be there. Take care of yourself, Bill. I reckon it will be worth coming along to see us in the usual place, University College of N.S.W., Tiques Hill Rd., and the date to remember is Friday 8th. That's the date to attend if you have a little advice, you'll have to hang up a chifffag if you want a Hallucitron. 73 for Christ-mas, see you next year, 2AKX.

BLUE MOUNTAINS SECTION

Preparations for the section field day were finalised at the October monthly meeting where eleven members attended with Vice-President Bob 2ASZ in the chair. The lecture for the evening was cancelled due to the many members on holiday. A good night was had by all, although the meeting closed early. 2AWW, from St. Mary's, a new member, was welcomed into the club and apart from normal d.e. and v.h.f. operation, is keen on Antennas.

The Scout Jamboree of the Air went off quite successfully with stations Bill 2TS operating at Katoomba, Bill 2HZ at Springwood, Ken 2AVN at Blaxland, Don 2ART at Glenbrook, 2AZK ported to Penrith and Bob 2ASZ at St. Mary's, and youthfully Camden. Although the QRM was very bad, all stations were kept busy Saturday afternoon. Most of the Scouts enjoyed for the first time talking to neighbouring and distant Scouts. Many addresses for pen friends were exchanged and advice on various hikes, etc. was given by the mountain troops to several neighbouring district troops. The Camden troop received front page publicity including photo of the boys' campsite and equipment. Publishing of the Blue Mountain troops is still being organised. A note of thanks to all who helped out.

The field day held on 5th Nov. at Lawson Scouting Park was well supported with 54 registrations, including 10 V.R.s. The four day weekend was unusual and confusing in that it had two foxes on a similar frequency at the same time. This event was won by Lee 2RJ and Dave 2AWZ, the 144 m. scrabble was won by Bruce 2ZCF, second was Dave 2AWZ, the 7 Mc. scramble was Harold 2AAH and John 2WJ second. Other prize winners were Noel Walker, Sid 2SW, Peter 2JX, Mrs. 2DR, Mrs. 2ZFW and Bruce 2ZCF. The best try for the ladies in the afternoon was from Blaxland to see the model dendron show which proved most enjoyable. Yours truly would like to take this opportunity on behalf of the Blue Mountain Section to thank each and everyone who participated and helped out, and send many more for a bigger and better event next year.

Hearld Wal 2MZ and Ken 2AVN (at Blackheath) and Norm 2QA (at Blaxland) demonstrated their first mobile 2 mx equipment to the Blaxland, Don 2ART, Bruce 2ZCF. By all reports the demo, was effective and successful. Alec 2EX is still looking for a rock for his 2 mx converter; his tx has a 6/40 in the final which was unable to heat the other night. Many thanks to all the others. Jim 2ARL is back from holidays and although the weather was unfavourable for the first week and cold the next week, it appears he had a most enjoyable holiday. Our mate, Noel Walker, had not been able to get on the 17. bands. Apparently he has been listening in on the local 2 mx gossip, Noel.

National rx is back on 2 mx with a new National rx and his 17. and 2 mx mobile. He also looks forward to getting his 2 mx mobile. The first couple of weeks have been full of accidents—lost pole, broken finger and nearly shark bait. Good to hear you, Sid. Warwick 2ZMS is back on the air with his cheery voice after a long spell, study being the main cause. Cheering, 73, 2ADA.

BOORAGUL HIGH SCHOOL RADIO CLUB

No 14 Mc. activity yet although we have been on the air regularly on 40 contacting stations VK2E and even getting pleasant reports regarding our work. 2ATZ has been favourably mentioned in the news paper on 20 as the length of the 20 mx dipole which has proved to be too short by several inches. This should be put right by the time these notes appear.

A number of new members have joined the club and our numbers have increased to around 20. Most of the newcomers have finished basic electricity and are now puzzling with resistors and capacitors.

After the final exams, have finished there will be another Sunday trip to Dural to see 2WI in action. The visit earlier in the year caused a great deal of interest and arrangements are in hand to let some of the new members join the party this time.

OBITUARY

JACK PIKE, VK2JP

Tuesday, 17th October, saw the passing of one of our very old timers of Amateur Radio, Jack Pike, VK2JP. He suffered a sudden heart attack and now must be numbered as one of the growing band of immortal pioneers in the radio art, who all too rapidly are passing beyond our ken.

Jack was one of the founders of Members of the Wireless Institute in 1910, having commenced experimental work several years before that date, operating a spark transmitter with which he exchanged traffic with commercial and naval vessels in Australian waters. His pre-world war 1 call sign was XDY.

In association with Chas. Macleurian, 2CM, and Basil Cooke, of Sydney Observatory, Jack constructed with his own hands gear to permit reception of time signals on very long waves from overseas, and was one of the first to receive long wave transmitted signals from Joe Reed, who unfortunately experimented with the Collins House Post Office Station in Melbourne in 1921.

Using a multi-stage t.r.f. receiver on 200 metres, Jack was successful in 1922 in receiving signals from Major Mott, of California.

For many years VK2JP had concentrated on 14 Mc. operation and had many friends throughout the world with whom he kept regular schedules. On the 1st November to his sudden passing away, Jack was conducting experimental work on the erection of a vertical radiator to secure that low angle radiation vital for long distance communication. He will be well missed by Amateur operators in practically every country of the world.

Our deepest sympathy is extended to his widow, Mollie, and his family in their sad bereavement.

ERIC McCREADY, VK2EV

The death occurred recently of yet another of our members in Eric McCready, VK2EV, laterly of Brighton-le-Sands.

Eric will be remembered by many of the Amateurs of yesterday as one of the original members of the Lakemba Radio Club. The sympathy of members is extended to his family.

If Ian 2AJF does not take a job before the end of the year he is to start a new project rolling. It is the building of a new tx for the club using the ATB v.t.o. presented by the club. The final will be an 807 with about 40 watts. This is also in mind of a 2 mx rig being built up next year, so watch out you 2 mx boys. 73, Bruce, for 2ATZ.

VICTORIA

The lecture arranged for the November meeting had to be cancelled at the last moment but it was indeed fortunate that Kel 3ZFP, the editor of your favourite Amateur Radio magazine was able to come along and tell us the story of his one-man expedition to Alice Springs early this year.

Although the main object, that of providing contacts with VK8 on 50 Mc., was achieved on the first night under poor conditions, it was evident that Kel enjoyed the trip. His description of the plane journey showed that air travel off the main routes has little in common with the advertisements. The photographs taken from the plane made the city dwellers realise how little there is above the own country. Incidentally, Kel mentioned that although he took the minimum of clothing, his baggage was 60 lbs. overweight! The ground staff were curious about the collapsible beam and obviously doubted the sanity of its owner.

Kel discoursed in his cheerful ironic style, with an apt choice of words, a dry wit (well suited to the subject), a sharp eye for detail, and the raconteur's knack of making the most ordinary tale sound like a legend on a page of A.R.R.L. Handbooks that can not be paid by the Editor to write this! Thus we were enlightened by his dissertation on the effect of isolation on the social and economic life, the problems of the aborigines, the supreme importance of "The Buttermilk" and so on. On the radio side, it appears that the difficulties caused by heat and dust are compensated by the lack of man-made noise and the advantage of being a DX station. In addition,

Kel is an expert photographer which was shown by the colour slides which illustrated the lecture.

The President, David 3ADW, thanked Kel for a most absorbing talk which was both interesting and instructive.

The following new members were approved by the meeting: A. Langer and M. Tarrant, G. Richardson (SAWT), J. Wallace 3VVI, A. Johnson (SZMK), K. Nisbet (3ZKK) as full members.

The December meeting will be devoted to the family social night with entertainment suitable for the children. It is expected that the ubiquitous Father Christmas will be there as usual.

The first meeting for next year has been set down for February 7, 73, 3AEI.

MOORABBIN AND DISTRICT RADIO CLUB

The above club made history at the third gathering of Senior Scouts at Cliford Park on the week-end of 21st and 22nd October, 1961. The fourth Jamboree on the Air, an annual event which is becoming more popular each year, Cliford Park, near Croydon in Victoria, is a magnificent property some 25 miles to the east of Melbourne in the foothills of the Dandenongs.

The Moorabbin and District Club was approached by the Scout organisation, Mr. Ken Walter, and the members were extremely pleased to be able to help the 500 or so Senior Scouts gathered at Cliford Park by going portable for the week-end. This in addition to the other activities of music, dancing, drama, archery, "operation impossible" and caving, was added the Jamboree on the Air, the ability to speak to other fellow Scouts in Australia and overseas.

Some weeks prior to the event a group of members travelled to the Park and preliminary siting arrangements were made. This visit was followed on the week-end before the Jamboree for members to erect antennae and to test out the equipment. On the Sunday on the main scene of Scouting operations, Bert Rooda, of newspaper fame, took a snap which subsequently appeared in the evening Melbourne newspaper. On the Monday evening following, we saw our President 3AWO on tv. in the Scouting programme. Thus, by this time quite a bit of publicity had resulted and on the air under their own call signs, club members became known the word around and many QSOs had been feed in.

In all fifteen members formed the operating team and separate equipment, both receiving and transmitting, was provided for all bands down to 144 Mc. The operation was split two ways between the two stations, Graham 3ZMQ and A.O.C.P. candidates Hal and John were set up for 3.5 and 14 Mc. in a marquee near the main scene of Scouting operations. The main antenna of a Type 200 for 3.5 and a 60w home-brew tx with a Collins 3AAE Antennae consisted of two long wires (300 ft), a couple of Windoms and a vertical. The equipment was powered from S.E.C. mains.

The second group consisted of Harold 3AFQ, Peter 3AMZ, Alan 3AC, Kevin 3ARD, Ray 3AZP, Graham 3ZPP, Don 3ASG and helpers. Doug's station was situated on top of Boomerang Hill over looking the other activities and was powered by two motor alternators, petrol driven. The frequencies worked out and 21 in the 144 m. and 50 and 144 Mc. in the v.h.f. range, and the gear consisted of another 60w. home-brew tx with an AMR300 converter, 144 Mc. was set up, but unfortunately the antenna failed at the last moment. The antenna was a multi-dipole h.f. and beams on the v.h.f.

All bands a total of 162 contacts were made. The record was broken, 162 by 3AFQ with many QSOs going for an hour or over this number represented a lot of transmitting time.

From the Scouts' end their organisation was first class and each half hour throughout the period of activity a fresh group of lads appeared at both operating sites. In general, progress was slow, about 30 QSOs per hour so that the Scouts were not disturbed by background. This was not always possible of course but several times 5S contacts were made without glamour value compensated for poor copy. This applied especially to overseas contacts such as those with Hong Kong, Bangkok, California, Oslo and G. lands.

Band conditions were a very mixed bag, 80 mx was full of QRN until late on Saturday night when it cleared. As a consequence the 50 m. was not QRT until 2 a.m. on Sunday! 40 m. was in the shape of a 100 m. band of stations who were using it—with the early forenoon being the best for good copy. 20 mx whilst quiet was open mostly for short skip and not too much DX was worked. 15 m.

the other hand was mostly dead but a very good opening Saturday evening gave us DX contacts. At no period were we able to run contact 10 min. and we were very sorry not to contact the Headquarters Scout Station in Montreal, VE3JAM. 6 mx carried a surprising amount of traffic (VK6) and took over 1000 m. px passed out one contact—4/4 effort over a five-mile path! We heard a lot more but the 222 went sick and was not repaired effectively in spite of some pretty intense effort on the part of all concerned.

From the great amount of fun that was had by all, the Scouts themselves showed a great interest in the workings of Amateur Radio and expressed their appreciation of our efforts. We in our turn learned more about portable operation.

As for the feelings of the Scout Group, I think the following extract of a letter from Jim Maynard, S.M. of the Kallangur Group, will clear this point:—

"Many of the boys were not too keen at all to begin with, but it is a credit to the operator and the station. Radio communication generally by the end of the day most of the Scouts were quite interested and indeed some were most enthusiastic about the whole venture and would have liked to go on all night. At this stage I would like to pay tribute to the members of the Amateurs and the Queensland Branch of the W.I.A. for the work and enthusiasm which they put into the Jamboree in order that it should be successful. To me, it was quite evident that a spirit of brotherhood and friendship exists in Amateur

The QSL cards provided by the Queensland Tourist Bureau will be on hand soon and Jack 4L has been appointed distribution officer. These cards will be provided free and will be available upon request. These cards were supplied and designed by the Tourist Bureau as being the most suitable for depicting Queensland overseas. Correspondence and cards will be printed in more than two colours, which rules out the possibility of printing multicolour scenes of the Barrier Reef, etc., which would have been better received. The normal printed QSL information is on the card with space left for insertion of the individual Amateur's call sign.

Also discussed at Council was the cost of sending a delegate to the next Federal Convention at Perth. There have been few agenda items submitted to Council for this Convention so if you have not sent in that one you have been doing well. News of the administration being reprinted and will be available free upon request. Clerical procedure is being improved within the Council which will mean a rapid reply to your correspondence. Steps are also taken to form a Library Committee and details will be supplied at a later date. There is a vacancy in the position of Class Manager so if you feel competent, let's have your name. The visit to Amberley Air Base was enjoyed by the present and all voted it as most interesting experience.

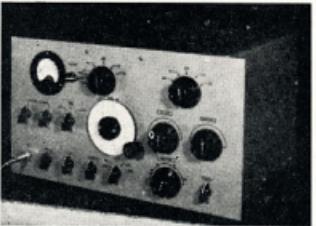
We had a good attendance at our October general meeting, general business being quickly despatched to make way for an interesting lecture by Mr. Harry Brown, 4IA. He gave a very informative lecture showing that he really knew about "Ionospheric Predictions" and how little we knew about the subject ourselves.

A discussion took place on the new frequency allocation and concern was expressed by some of the more experienced members on the present position. No matter how much a person has in continual use of a particular frequency will surely whittle him down to nothing. This is a democracy and our own personal views can only be brought before the governing body through our elected government representatives.

SOUTH COAST ZONE

The mobilizers to and from the Sunshine State are now either at their home or very close to them. Meeting up with Sid 2SG ex-4SE was quite an occasion. His company would depress the depressed to high levels and his brief stay was very enjoyable. Eric 4XR back in Queensland and there are none now completed he will be back at home, while Jim 4HZ is approaching the border. Apparently all had a most enjoyable trip and the experiences of living on the air in person added to the enjoyment of the holidays. Coolangatta Radio Club are starting A.O.P. classes. May success attend their good work. 4WS has been in contact with 2ABZ—originally 0A4B. Being an old Queenslander, 2ABZ is anxious to contact any VK4s especially 4WR, 4WO and 4RJ.

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CHANGE OF ADDRESS

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WIDE BAY AND BURNETT

The monthly meeting of the Wide Bay and Burnett QSL Club was held due to the fact of the members being on holidays. The whisper has it that the Gympie gang have been bitten by the 50 Mc. bug with 4HZ spending a lot of time looking and listening. 4HZ has now returned from holidays in Victoria where he attended a Convention there. Members of the Group taking part in the Jammer of the Air were 4LM, 4HD, 4GM, 4CK and 4ZHG.

Congratulations go to the Bundaberg gang in forming their own club and if it is good to hear of the new call signs on the air. Hughie 4HE, having completed mobile gear, will be using same soon. Stations 4PU, 4HD, 4ZBS, 4ZAG, 4LN are now working 50 Mc. regularly, 7 to 9 p.m. night. To you, Mr. Leakey at Urangan, congratulations from the gang in obtaining your ticket. Gympie associates are still plowing through their lessons under the whip hand of 4XR and local b.c. tech. John.

PERSONAL PARS

QSL cards are waiting at the Bureau for VK4, 4SJ, 4SQ, 4SR, 4TW, 4UN, 4WW, 4XF, 4XM and 4XS.

Det 4HJ is recently come out of hospital. Jim 4PZ is going into hospital for a minor operation on his hand. Bob 4RW is on an overseas trip, 73, 4ZE.

TOWNSVILLE

It was very refreshing to see so many participating in the annual meeting, although conditions were not so good for overseas. Quite a large number of stations were heard working, till late on the Sunday night, VRIG and VRICB the latter station having the Sea Scouts present. The local Sea Scouts were heard at 4PN on the Saturday night. Townsville talking to all and sundry. Other locals taking part were 4MF, 4PS and 4BQ. I was listed to receive some Roverus but they failed to arrive.

Scouts AUX certainly had the game sewn up for the Lower Burdekin, in all 47 Scouts talked to 210 Scouts at 37 different stations and had made arrangements to swap 107 badges and a large number of scarves.

Scouts, the radio must have been the worst on the bands because in the morning no stations were heard on 14 Mc., even 4FV relayed news to 4PN on 7 Mc. Do not know how the southern boys made out with their morse code.

As I will have to return to the S.S. Strathmore on November 9 for a tour overseas, including the Far East, I will take this opportunity of wishing you one and all the Compliments of the Season. Claude 4UX has promised to do the notes until I return, 73, 4RW.

AMATEUR RADIO ON DISPLAY AT TOWNSVILLE FAIR

Once again the Townsville Radio Club participated in the Trades and Industries Fair, which was held in Townsville during the last week of September. Quite a passing spot for the unemployed and thanks are given to the boys who participated in getting the radio gear ready for the occasion.

As seen by the photograph on the cover of this issue, Bert 4LB was the lucky operator in charge of the equipment when the photographer took his picture.

Although conditions this year were not as good as when the last one was held a few years ago, a large number of stations in Australia were contacted plus a few of the Pacific Islands. It is intended that the QSL cards will be sent out promptly this year.

At all times there were quite a large group of lookers. The amateurs of the future were fascinated by the oscilloscope which was used as a modulation checker, while the speaker attached to the monitor allowed the audience to hear all that was said to the valve. And, of course, there was room for QSOs.

The local paper had a nice column on the Radio Hams and special mention was made of Eric 4EL, who has had 21,000 QSOs since he came on the air in 1928. Leaving out the year when we were off the air, he has had 21 out at an average of 22 contacts a day for 26 years. Certainly a mammoth performance! —4RW.

— . . . —

SOUTH AUSTRALIA

The monthly general meeting of the VK5 Division for October was held in the Club rooms to more than capacity house. In fact I got the impression once or twice that the members were hanging from the ceiling. It just goes to show how unlucky I can be, because last month I was hoping for a full

house to throw up against Bill Moore ("R. & M.") and only succeeded in getting a "no seating available" house. Oh well, I was ever thus.

The meeting took the form of a buy and sell night, and once again proved very popular. The type of entertainment is just what the doctor ordered, for the VK5 Division anyway. In trying to find the reason for this type of night being such a success, I am reluctantly forced to the conclusion that the auctioneer, with his tongue in his cheek, repartee, his ready wit, to say nothing of his gay demeanour and extreme modesty, more than does his share toward the evening's entertainment. Of course it is hard work for me to keep him on my side, but I am grateful for the fact of my shyness and natural modesty, I would be forced to give myself a pat on the back! However, I have decided to let my actions speak for themselves and will make no reference to my obvious talents. Modesty, they say, is a virtue.

Very little can be written about a buy and sell night, except to say that the gear for sale was only fair in quality, the one or two good articles bringing a satisfactory price, and the junk being gaily baited for by the unloading auctioneer or withouthandsome who tossed their fourpence and eighteenpence around with reckless abandon, despite the refusal of the auctioneer to accept less than a shilling rise in bids. However, with these youthful buyers ranging from novices, they contributed immensely to the night's entertainment, egged on by the auctioneer who, whenever a piece of junk received a no-bid, managed to throw the said junk in their direction, cheered on by the enthusiastic applause of the audience.

Toward the end of the auctioneering, I was insulted, humiliated, and embarrassed by a practical joke played by the three members of Council who were sitting behind a screen with the gear for sale, and in view of the fact that everybody said that I would not be game to mention it in the monthly notes, I will say no more here but will give the said individuals detail later on. Norm Clegg, after an absence of several months, sold nights turned up again and assisted me not end in disposing of the gear, and made my task much easier by holding all the heavy pieces, thus saving my back from bending under the strain. Summing up the night I felt that I was one of the most successful of its type, proving beyond doubt that buy and sell is still holding their place on the popularity grade.

The Chairman, John 5JC, pulled his usual canny trick out of his hat at the beginning of the meeting, by saying that as Keith SKH-SW was not as yet present, and had all the money with him, perhaps some business would be possible. He then went up and had a friendly discussion on the proposed field day to be held at Clare, which, incidentally, was put back on the lap of Council to finalise, very little business was handled, either from a Division or State point of view, and then by a very strange coincidence who should walk in, his coat and pants all dusty from where he had been leaning against the wall outside waiting for his cue to enter, none other than Keith complete with moustache and chin grin. The audience roared and marveled at him which wiped the grin quickly off his face and he took his seat at the table firmly convinced never to be a partner to the Chairman's foul scheme.

Several new faces were seen at the meeting and several apologies were received from those unable to attend, which was all to the good because I don't know where we could have fit them in. One apology brought the house down. It was from Doug 5MD who regretted his inability to attend because no cups of tea were served at the meetings!! Council has the master in hand Frank, and will probably purchase a thermos flask!

The meeting closed with the witching hour of 11.15 p.m. although when I left, at 11.30, half the meeting were still ear-bashing each other.

Gil 5GX took me aside at the meeting and gave me a talk on the birds and bees. It appears, according to him, that I am the only one who calls himself a son. The subject of the subject, Bill 4GL, sorry Gilbert, I won't make the same mistake again. I will always believe myself Gil, sorry Gilbert, because I had a faint suspicion that you were thinking back to Gil, sorry Gilbert, was holding a bunch all reserved for me. Was it Gil? Sorry Gilbert.

Doug 5DW was heard and worked, fixed portable at Barmers, several times this month and considering his power the signal at times was 7. This was incredible. The note that I wrote about Doug, in this magazine, was to the effect that he was giving the game away and I said that that time would tell. Considering all the contacts that he had with Inter-

state and local during his two weeks' stay at Barmers, if that is giving it away, then I hope he never takes it up seriously!

Leith 5LG, after reading last month's letters to the Editor, on c.w. and s.s.b., sat straight down and wrote seven pages of notes to me. He enclosed a separate subject telling me to censor it and then forward it on to Ye Ed. Two days later he rang me and asked me to hold it as he had thought of some more to say, apparently there were more comments, but he didn't want me to get me up and asked me to tear it all up as he did not see why he should feed other people's ego. Good philosophy Leith, no fuel—no fire!

If by any strange chance anyone happened to read this note, then, not only will I remember that a narrow opening was to be provided for me to stand in on the stage whilst carrying on my duties of auctioneer at the buy and sell night. Well, you should have seen the small crowd now surrounding you could have driven a road transport through it. That's Council for you, promise one thing and then do the opposite. If it had not been for the fact that I had a bit of difficulty moving around in my chair I would have waived my arms in protest!

Congratulations to VK5 on the R.D. results and a pat on the back to VK7. It was a pleasure to lose to VK8 and sad to finish in front of VK7. Next year I hope to be better prepared to stand in front of VK5 and a pleasure to keep VK7 where they are. This all adds up to the fact that we give three cheers to the winner, two for the losers, and one for the emcee.

A visit to VK7 this month was none other than the prodigal son, "Roop" 7RM (ex-5RM). "Roop's" association with VK5 goes back to the old 200 mc. days when his dulcet tones and music used to entertain the d.c. listeners of VK5. I am sure that after a few months he noticed a big change in our fair city and a bigger change in the radio fraternity.

With respect to my biting the dust at the meeting, I can only say that I was fairly and squarely beaten because I made it a practice to read slowly and distinctly the tube letters and figures marked on the box. I always say a six see six, or a six see five, etc., etc., and when I was handed a box with "PS" on it I would say "PS" and "PS" and now we have a tube complete with box, a PS one As." When I said it, I was thinking that is a funny tube, I have never heard of that one! Anyway, in the hope that someone in the audience would know all about this tube, I again said slowly, loud and clear, "Now here is a funny tube, it is a PS one As Eas Eas." Then with a thud, which could have been heard in VK5, it hit me, and when I turned round I saw the most indispensible helpers, Doug 5MD, Jim 5QX and Pat 5US, knew that they had caught me at last. In sheer disgust, I threw the box to the floor, but instead of the tube breaking in a thousand pieces, it was still a full flop and only straw came out. The jeans, catcalls, hoots and general pandemonium that existed had to be seen to be believed, so much so that it woke Keith SKH up, he was asleep at the table and there stood the bunch of humiliates, and the members of Council at that, whilst the general membership revelled in my downfall. When I arose next morning, I discovered that one half of my serial had fallen down during the night so you can see the damage that can be done. Never mind, little apples will grow again!

The wedding of Joe 5JO went off with a bang this month and a number of the local boys turned up to wish him well. Frank SMZ, Gil 5LL (Luke to you), Dave 5DS, Arthur 5YI, Grandpa Ray 5RR, and several others were in attendance and in keeping with the VK5 tradition for a good roll-up, the church was standing room only (Bill Moore please note!). I, of course, blotted my copy book with my XYL, the bride and groom had to be seen to be believed, but when the wedding procedure was explained to me, I went back and had several demonstrations with the bride, the bridesmaid, and any other females who were unwise enough to stand too near the bridal party, thoroughly enjoyed the evening and am in the market for any other weddings that might turn up. However, I am finding it a bit cold in the kennel in the laundry these days, but a reprise is in the offering. I understand that they fancied the milk of the gathering. La Panze, they call me!

Had the pleasure of meeting Harford Scott at Joe's wedding. Although not a licensed Radio Amateur, he is a keen follower of all things Radio, is mixed up with the E.F.S. in Currie Creek, all of his time is spent in the radio and would say that the distance of his QTH from the city, and consequent lack of opportunity for specialised study, is the main reason for his not yet possessing his call sign. A long-time mate of Joe, he was in his element

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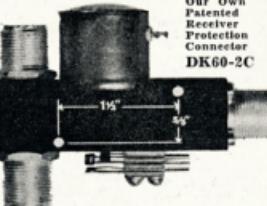
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at the wedding joining in the ear-bashing of the Amateurs present. Nice to have met you Hartford. I say all of us.

Stuart SWS has been fairly busy at his vocation but has managed to get the s.s.b. going and is quite happy to report his first contact using some 10 watts to his exciter. He has a two element vertical and a 15' dipole wire centre of the quad about 70 feet off the ground. His three element yagi is still used on 14 Mc. Ron SVH is a very busy man in his chosen profession at the moment, but is giving thought to 80 m^x and the building of gear for that band. He is also getting ready for the 15 m^x gear ready for the summer months and is looking for xtal's in the c.w. portion of the 80 m^x band. It would seem that he means business. What about the glidium Erg?

Leo J has been bitten by the t.v. bug, but the latest bulletin states that he is slowly recovering from the symptoms as his interest stemmed from a desire to learn more about the art. He has promised to let all interested know when the Adelaide and Melbourne shows are held. I am sure there will all make a rush for their 2 m^x rx's. How low can they get in the Mount area? Claude SCH has gone somewhat into smoke this month and cannot be contacted for a statement. It could be that he is still working on his project or that he is three of building some gear, that he is in VK3 buying all the available disposible gear, or that he is just having a temporary rest from Radio. Your guess is as good as mine. Col Stevens is still with us Mc., as I well know, having contacted him on that band this month. He almost lost his voice from shock, and is also very busy preparing his v.h.f. gear for the coming season. Dale Aslin, one of the Mount Gambier s.w.l.'s, has got a ticket on October 17 and is eagerly awaiting the results. Hope the news is good Dale.

Talking about the S.E. area, Joe SJO asked me to say that he appreciated the many kindnesses shown to his XYL and himself whilst they were staying with us. They thoroughly enjoyed themselves whilst down there, and the hospitality from the gang had to be experienced to be appreciated.

Fred SMA has recently acquired a tape recorder to help him with his studies. According to my say, Fred will soon be bilingual, and after looking it up in the dictionary, I was a bit dubious about that one, I now look upon Fred with some awe. Language study whacko! It is a pity that you did not keep the recorder when Tom STL jammed his finger in the door, you would have heard language, and how!

Incidentally, Tom STL was down in the city recently, but unfortunately it was to attend the funeral of his father. He extended our sympathies Tom. By the way, that was a nice sort of an act you put on when you contacted me on 7 Mc. the other day. People will think that I never am on the air. A nasturtium on my character, that's what it was. Anyway, keep the ears open on that band in the future, it's marvellous what you hear on that band when you have not got a gun!

Reports have been filtering down to me that SKS, christian name unknown, is dominating the local scene. He is a real charmer, bobbing up on the bands. He borrowed a stack of "A.R.V." from Tom to bring himself up on things, so it won't be long before he joins the army of my detractors. Reports have come into the round-table hook-up on 7 Mc. the other day to remind my espionage agents to put on their false beards and black cloaks and deliver the goods, and thereupon threw the said round table into complete chaos. If it had not been for Peter JJB jumping in at the last minute, Tom, SWS, GSP, Col SCH, Snow SNW and myself, into some semblance of order, the round table would have been a square one with five legs. My apologies gentlemen, but I am a stickler for rules and believe me, all those flattering remarks about my rudeness will get you nowhere.

Ian SQX, by the time that this is being read, will have taken up his abode at Woomera for another year, perhaps the majority of us expect that his association with the VK5 Council must come to an end and I say without fear of contradiction that the Council has lost a keen and sincere worker and we all hope that should he one day return to the city of Elizabeth, he will again give of his utmost on the

Council again. I really should not say all this because he was one of those dastardly folk who assisted to hold me up in ridicule at the last meeting, however the truth must out, dastard or no dastard. For you evil minded folk, a dastard is one who commits a dastardly deed and if it was not that a dastardly deed, what is?

My personal opinion is that Luke SLL has come up with the true story as to how Luke SLL earned his now famous tower. It appears that Brian SZB1 of Maitland put Luke onto a tower that was available over that way and hurriedly musterling the Admiral SZAA and Alan SZC, the latter for some reason arrived at their destination. Luke immediately appointed himself as works manager, found the shadiest tree, and at once fell off to sleep, only waking up when the tower had been disassembled and the top cut off. Both of his slaves worked their fingers to the bone, both were refused a tea break by Luke because as he cunningly put it, there was not any tea, and now both refer to Luke as Simon Legree, and there is no doubt in the underlying tone of bitterness and scorn as they mention his name. Man's inhumanity to Man!

On the trip home from Maitland, Alan SZC fell asleep. Luke knew that at the place where Alan signs the time sheet they have Klaaxon bells which go off in various ways, so he dug one up and gave a loud blast on it and Alan woke at top speed, went twice through the car roof and once through the windshield, and it took the gang about ten minutes to calm him down again about his neck. Again I say Man's inhumanity to Man!

I put up a new aerial this month and if it had not been for Col Stevens, one of the associate members, who fortunately dropped in at the right time, I don't think I would have finished it. It doesn't look it, I am getting old. We only made one mistake, one of us tied the halcyon to the garden roller and up she went, looked quite cute dangling from the pulley. I suggested to Col that I would go inside and get my mother-in-law's old broomstick and fly up there and cut it loose. He thought it was terribly funny until he saw me go white as my XYL came out and heard the lot. He left in quite a hurry as I was being escorted to the laundry. Apparently he knew where the dog kennel was kept.

Well, Ye Ed, has his hair turned grey, so before he can use it, I will say on behalf of the VK5 Council and the membership of the Division, "A Merry Xmas to all Divisions, both Council and membership, and may you all get the best wishes for the New Year. To those whom I have quarreled with all the year, I hope that we shall all next year, and if I have said anything that I should be sorry for, I am glad of it. T3 SP5 (Panxy to you!).

TASMANIA

The Jamboree of the Air has passed for this year and it can be truly said that congestion on the bands was worse than during an R.D. Contest, due to the fact of course that contacts were of longer duration. Many VK7 stations took part this year, but few contacts outside Australia were made. On the other hand, many good contacts were made and the Scouts had a great time as well.

Charlie 7KS was mobile marine with the Sea Scouts and Jack JWB went into camp with them as well. 7ZB and Michael 7ZD were the base station at the St. Helens Scout Hdq. and did an excellent job there indeed. It is not possible to thank each station individually for help, but the Council congratulates you all and on your excellent job.

The VK3ZC Council has been passed, and conditions were very changeable during 12/21 Mc. band did produce some very good contacts however and those stations who took part were well rewarded for their trouble. It is something rare to DX contacts in the Pacific area, so the "Q" phone contest was deplorably bad and virtually no contacts were made from Southern Tasmania.

T.V. has reared its ugly head for the first time in Southern Tasmania and a T.v. Committee has been formed to assist, and we all wish that committee the best of good fortune in its delicate but important work.

Remember the outing to Arm on Sunday 10th December, the Armchair will be the Christmas Get-together, so all VK5 YLs and harmonicas are most welcome. Bring along your mobile gear, both transmitting and direction finding, and be in the fun too. Watch the Bulletin for full details.

We welcomed Ken ex-7KM back from the States at the November Divisional meeting and we confidently expect a most interesting address from him before he returns to M.L.T. Ted TEJ delivered the lecture at the November meeting, the subject being "Getting on 2 Mx

Cheaply". As a result of his lecture, some new call signs can be expected on that band. Speaking personally, I thank Barney TZAK for lending his 3 m^x gear to me. I have had lots of fun talking to the boys on 144 Mc.

With best wishes to all readers for Christmas 1961, from Ian ZZ2.

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ECCLESINTON ELECTRONICS

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|-----------|------------|-----------|-----------|-----------|-----------|------------|
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| DC 3050 | FT 4440 | FT 4930 | FT 5635 | DC 6021.1 | DC 6561.3 | FT 7375 |
| FT 3195 | FT 4445 | FT 5005.6 | FT 5655 | LP 6032 | FT 6550 | LP 7450 |
| DC 3320 | FT 4465 | FT 5110 | FT 5660 | LP 6040 | FT 6560 | DC 7400 |
| DC 3323.5 | FT 4483 | DC 5145 | DC 5700 | FT 6050 | LP 6561 | FT 7406.6 |
| FT 3340 | FT 4490 | DC 5166.6 | FT 5706 | LP 6110 | DC 6572.3 | FT 7425 |
| DC 3440 | DC 4495 | DC 5170 | DC 5710 | LP 6130 | LP 6640 | FT 7440 |
| FT 3690 | FT 4535 | FT 5180 | FT 5740 | LP 6210 | FT 6650 | FT 7600 |
| FT 3828 | FT 4540 | FT 5205 | FT 5744 | FT 6225 | DC 6700 | LP 7890 |
| DC 3830 | FT 4549 | DC 5210 | DC 5770 | FT 6235 | DC 6750 | DC 7890 |
| FT 3830 | DC 4660 | FT 5237.5 | FT 5773.3 | DC 6240 | DC 6783.3 | DC 7925 |
| FT 3885 | FT 4672.75 | DC 5250 | FT 5775 | LP 6243.3 | FT 6815 | LP 7930 |
| DC 3930 | FT 4676 | DC 5285 | FT 5780 | FT 6265 | FT 6840 | DC 7962.8 |
| DC 3970 | FT 4695 | FT 5295 | FT 5782 | FT 6300 | FT 6890 | DC 7810 |
| DC 3995 | FT 4730 | LJ 5300 | DC 5810 | DC 6350 | FT 6935 | DC 8036.2 |
| FT 4010 | FT 4735 | FT 5360 | FT 5815 | FT 6355 | LP 7010 | DC 8171.25 |
| FT 4025 | FT 4750 | FT 5365 | FT 5852.5 | FT 6375 | LP 7120 | DC 8176.9 |
| FT 4065 | DC 4750 | FT 5397 | FT 5855 | DC 6420 | LP 7171 | DC 8182.5 |
| FT 4080 | LP 4765 | DC 5410 | FT 5897.5 | FT 6462.5 | FT 7175 | DC 8460 |
| FT 4180 | FT 4780 | FT 5437 | FT 5910 | LP 6470 | FT 7200 | DC 8469.23 |
| FT 4235 | FT 4815 | DC 5515 | LP 5910 | FT 6515 | LP 7205 | DC 8645.45 |
| FT 4280 | FT 4840 | DC 5530 | FT 5920 | LP 6522.9 | LP 7270 | DC 8488 |
| FT 4295 | FT 4852 | FT 5551.5 | DC 5950 | FT 6535 | LP 7350 | DC 8525 |
| FT 4315 | FT 4885 | | | | DC 7362.5 | DC 8562.85 |

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| FT 3535 | DC 3560 | DC 8383.3 = 50.4 Mc. |
| FT 3536 | DC 3562 | DC 8400 = 50.4 Mc. |
| DC 3537 | FT 3564 | DC 8416 = 50.5 Mc. |
| FT 3534 | FT 3573 | DC 8450 = 50.7 Mc. |
| DC 3547 | FT 3575 | DC 8483 = 50.8 Mc. |
| FT 3549 | FT 3580 | DC 8500 = 51 Mc. |
| FT 3552 | FT 3587 | |
| DC 3552 | FT 3595 | |
| 7 Mc. Ham Band: | 144 Mc. Ham Band: | |
| DC 8000 | DC 8014 | DC 8016 DC 8022.5 DC 8029.5 |
| DC 8010 | DC 8014.5 | DC 8016.5 DC 8023 DC 8030 |
| DC 8013 | DC 8015 | DC 8017 DC 8023.5 DC 8030.5 |
| DC 8013.5 | DC 8015.5 | DC 8017.5 DC 8024 DC 8031 |
| | | DC 8018 DC 8024.5 DC 8031.5 |
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| | | DC 8019 DC 8025.5 DC 8032.5 |
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| | | DC 8021 DC 8027.5 DC 8034.5 |
| | | DC 8021.5 DC 8028 DC 8035 |
| | | DC 8022 DC 8028.5 DC 8035.5 |
| | | DC 8029 |

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Battery used: UM3

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